THE Soybean Digest

Hotel Nicollet, ASA convention headquarters Sept. 6-7-8

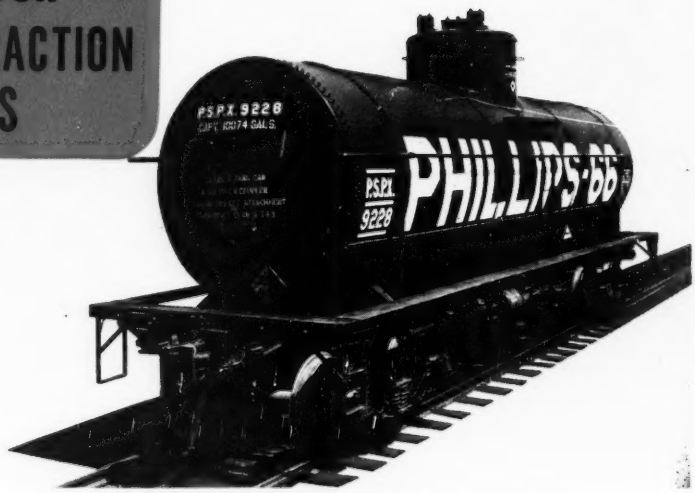
Official Publication

AMERICAN SOYBEAN ASSOCIATION

VOLUME 9 • NUMBER 9 JULY • 1949

TANK CARS THAT ARE *Clean as a whistle*

DELIVER YOUR PHILLIPS EXTRACTION SOLVENTS



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You should see the care taken before loading a car of Phillips 66 Solvent to assure you of receiving a clean, "on specification" product. The tank car, reserved for this type of service only, is thoroughly inspected before each trip and any contaminating material present is removed from the interior. Only then is the car filled with its carefully protected load.

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Phillips Extraction Solvents	*Typical Boiling Range*
Normal Hexane	151 — 156 F
Methylpentanes	139 — 145 F
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THE *Soybean Digest*

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HUDSON, IOWA

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IN THIS ISSUE

EDITOR'S DESK

NEEDED: A SALESMAN

Soybeans are being outsold all over the world today! On our domestic markets and in our foreign markets someone else is taking over because we are complacently allowing them to do so. The trend will continue so long as we allow it.

The soybean industry of the U.S. became of age in a period when products sold themselves—when the beans, the oil and the meal needed no selling because there was a line of buyers at the door to take them away. But times have changed. Our competitors are actively selling their wares.

Agriculture has been outsold in the ECA program. Industry had its men on hand to create the demand. We sat back and waited for orders. We got some. There were a few of them for soybeans. But not nearly as many soybeans went to Europe as were needed.

The same thing is happening to our domestic markets today. The margarine market is slipping away from us. Not to foreign oils, but to other domestic oils. Cotton is doing a better job of selling. Cottonseed oil usage is increasing in margarine production. Not because it is better—but because someone is making it his business to convince people that cottonseed oil is better.

And all the while the average producer of soybeans in the United States sits back and waits for someone else to fight his battles. Just too complacent to care.

The American Soybean Association is trying to do a job of representing the growers of the crop and their interests. To do so requires financial as well as moral support from the men who have something at stake. It is lacking. And it is necessary. The job can not be done without money any more than it can be done without active and interested support from the man who grows the crop. A few loyal leaders have supplied the time, effort and money expended to date. The average soybean grower has not responded to appeals.

WE MUST SELL SOYBEANS!! And soybean oil!! And soybean oil meal!! The time for mere talk has gone past. It is now time for action.

A WIDE-AWAKE ATTACK ON PROBLEM

Each day the need for some means of adjustment between exports and imports of fats and oils becomes more apparent. The producers of lard, cottonseed, soybeans, butterfat—all fats and oils—are now operating in an economy in which we are bringing in large quantities of oils and oil-bearing materials, exporting very little. The world needs our dollars, is sacrificing fats and oils to get them. We, very foolishly, allowed the Secretary of Commerce to maintain export controls in force, thus keeping all our production within our borders, even though it was needed elsewhere. Then, when the period of need was over in Europe, we opened our doors. The market was then gone.

Senators Gillette of Iowa and Wherry of Nebraska have introduced in the Senate a bill known as S.1594, which was described on page 53 of the May issue of Soybean Digest. A companion bill (H.R.4538) has been introduced in the House of Representatives by Granger of Utah. The bills, briefly, would levy an import duty on that quantity of fats and oils imported in excess of exports. Extent of the duty would be the difference between parity on fats and oils and the prevailing price. Net effect, then, would be to hold fats and oils prices at approximately parity levels.

Producers of lard have suddenly become interested in this bill. Other segments of the fats and oils producers are also becoming aware of its possibilities. The bills will bear watching. Hearings will start in the House agricultural committee July 12.

Senators Gillette and Wherry, and Congressman Granger are to be congratulated on their interest in this crucial legislation. The Western livestock groups and the renderers of animal fats are likewise to be commended for their wide-awake attacks on the current problem. They first instituted action in this field.

YOURS IS THE DECISION ON 1949 PRICES

Crop reports show a variance in soybean acreages between areas—with both decreases and increases from last year's figures. But they definitely indicate fewer acres than in '48. We can not expect average yields to equal last year's. The July crop report will be out at about the date on which you receive this issue. It will have more complete figures.

No matter how we look at the picture it always comes out about the same—there will be about 50 million bushels fewer soybeans to process from this year's crop. There will be a larger total of processing plants in operation. There will be intense competition for soybeans this fall. That should mean favorable prices.

But growers of the soybean crop hold in their hands the decision between favorable and unfavorable prices for their production. That price is dependent on *orderly marketing*. No crop when dumped upon the market in a very short harvest period will bring maximum returns.

Orderly marketing means provision of storage space for a major portion of the crop. That storage may be on the farm, in country elevators, or it may be in terminal elevators. In spite of the experiences of the past year, when prices declined after harvest, it pays to hold at least a portion of your soybean crop. Holding will, on the average, pay storage costs, interest, and pay a good return.

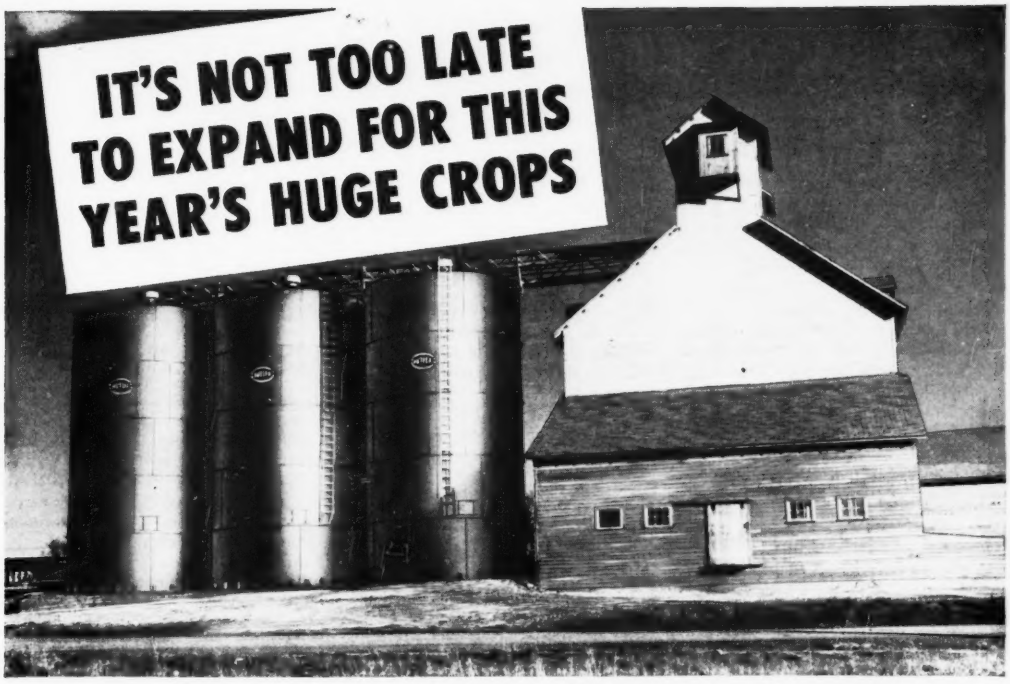
It is not too early to start planning soybean storage facilities right on the farm now. Governmental loans covering 85 percent of the cost of storage facilities are available at 4 percent interest. What can you lose? When there will be a 7c-per-bushel storage allowance on 1949 crop soybeans?

A FEW OBSTRUCTING MARGARINE VOTE

The 81st Congress, at this writing, has not completed action on margarine repeal legislation. The House of Representatives has completed its work on the bill, the Senate finance committee has reported it to the floor with a favorable recommendation, but the Senate has given it no consideration.

In that period between now and adjournment of this session the members of the 81st Congress can make themselves very popular with the American housewife, the cotton producer and the soybean producer if they will make HR 2023 an item of MUST business.

There is only one language we can understand now from the Senate. It is spelled A-C-T-I-O-N. Action on HR 2023.



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Get your share of this income by increasing your storage capacity with Butler Bolted Steel Grain Tanks. It isn't too late!

Butler bolted tanks are available for immediate delivery. You can erect them quickly—in just a few days—and offer approved storage to help relieve the critical demand for storage facilities. These structurally strong bolted tanks are fire-safe . . . weather-tight . . . and cost you less.

Don't delay! Place your orders now for Butler Bolted Steel Grain Tanks. Take immediate delivery—erect them quickly—and profit by the extra storage space you can provide. Write, phone or wire today.

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Send complete information on Butler Bolted Steel Grain Tanks.

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ACTIVITIES OF YOUR ASSOCIATION

TIME TO MAKE HOTEL RESERVATIONS

You should act now to make hotel reservations for the American Soybean Association convention in Minneapolis-St. Paul September 6-7-8.

From now on available hotel rooms will go—AND FAST. Make all reservations directly through Hotel Nicollet in Minneapolis, the convention headquarters. The hotel has agreed that when the block of rooms reserved for the convention is exhausted applicants will be placed in nearby hotels through the Minneapolis Hotel Bureau.

Be sure to specify that your reservation is for the American Soybean Association convention so that your room will be taken out of the Association block. Otherwise the management may inform you that no rooms are available.

As previously announced, your convention will be divided between Hotel Nicollet the first 2 days and a tour of the Minnesota Experiment Farms and Minneapolis-St. Paul on the third.

The convention will get under way with the usual informal smoker Monday evening September 5, and the formal program will begin the following morning.

Speakers will be of the same high caliber as in past conventions. There will be representatives of growers, industry and government, with both the national and international views represented. At least one speaker from the highest governmental level will be present.

There will be a program for the ladies Tuesday, with a noon luncheon and style show followed by an afternoon tour.

The tour on Thursday will include the visit to the experimental farms in the morning. Archer-Daniels-Midland Co. will serve smorgasbord lunch at its research laboratories at noon. The afternoon tour will include the famous Boulevard Drive with a view of some of the Minneapolis and St. Paul lakes, and also possibly a visit to one of the modern Minneapolis flour mills.

The committee in charge of the tour includes Henry Putnam, secretary of the Northwest Crop Improvement Association, F. E. Benson, vice president of Archer-Daniels-Midland Co., and Dr. J. W. Lambert of the Minnesota Experiment Farm.

People traveling to and from the convention are invited to stop at the Southeast Experiment Station at Waseca and see the soybean test plots there in charge of R. E. Hodgson.

Turn to pages 15-17 for details concerning Minneapolis-St. Paul, the convention cities, and also the Minnesota Experiment Station.

A complete convention program will be published in the August issue.

SOYBEANS ARE WORTH MORE MONEY!

Circle the dates Sept. 6, 7 and 8 on your calendar.

SEPTEMBER 1949

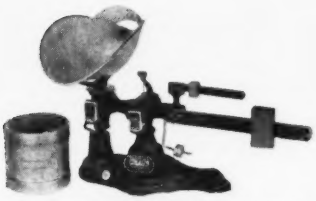
SUN	MON	TUE	WED	THU	FRI	SAT
·	·	·	·	1	2	3
4	5	**6**	**7**	**8**	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	·

Will Be Exhibits

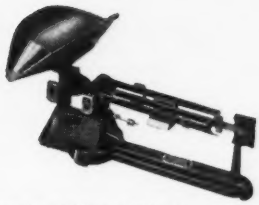
You will again be able to visit with your friends who serve the soybean industry in various capacities at the annual convention. You will also be able to see and talk with them about the new products and services they have to offer, as a large part of the mezzanine floor of Hotel Nicollet will be devoted to their exhibit booths.

Exhibitors will be most happy to spend a little time with you.

Following are firms that had reserved booth space at press time. A limited number of booths are still available. They will be assigned on a "first come, first served" basis



Seedburo No. 14 Four-in-One, a small, complete office scale for weighing samples for moisture tests, determining test weights per bushel, dockages, and mailing matter. **$39.50**



Seedburo No. 99 Gram Scale. Accurate, inexpensive scale weighing in grams for grain testing. Constructed of tough aluminum alloy to stand years and years of hard use. **$29.00**

Grain Inspection and Dockage Scales. Automatic . . speedy. Adaptable for use in determining dockage of any kind of material, as well as for percentage analysis.

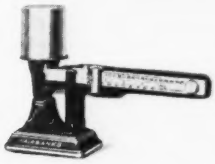
SCALES FROM SEEDBURO

of every capacity for every purpose

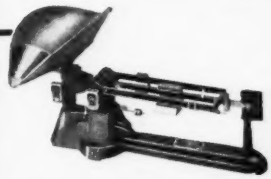
You can select scales with the capacity and sensitivity that best meet your requirements from Seedburo's broad line. Types available range from precision-built balances to rugged, heavy-duty platform and truck scales, specially designed for elevator, seed house, mill or processing plant.

Bring your weighing problems to us . . . we'll be glad to help you solve them.

Write for specification and prices.

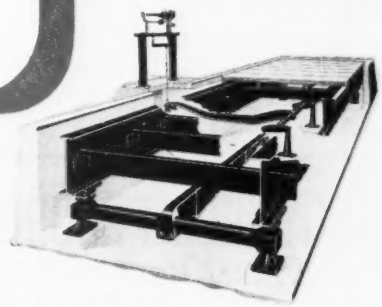


No. 103 Percentage Scale with cup. Ideal for rapid and easy determination of weight per bushel and dockage percentages. Includes 1 pint brass container. **$23.65**



Seedburo No. 127 Seed Scale for weighing small quantities of seed. Thoroughly accurate—yet inexpensive. **$32.50**

No. SE-1 Torsion Balance Scale. Recommended for very fine weighings. Capacity, 120 grams. Sensitivity, 2 milligrams. Price, without weights—**$190.00**



Seedburo Type "S" Truck Scale for motor trucks, trailers, tractor trailers, etc. Fifteen to 50-ton capacity.

No. 498 Eureka O.K. Bagging Scale. Weighs as it fills. Will handle four to six 100-pound bags per minute. Easy to install at working height of bagging spout or hopper. **$295.00**

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to firms that have not yet sent in reservations.

National Association of Margarine Manufacturers, Dave Fischbein Co., Crown Iron Works, V. D. Anderson Co., Arid-Aire Manufacturing Co., Skelly Oil Co., Seedburo Equipment Co., Humphrey Elevator Co., Burrows Equipment Co.

Nutting Truck & Caster Co., Sparkler Manufacturing Co., American Mineral Spirits Co., R. R. Howell Co., Tillotson Construction Co., Corn States Hybrid Service, Ames Powercount Co., Haaky Manufacturing Co., Cunningham Industrial Service, Allis-Chalmers Manufacturing Co.

Hart-Carter Co., Blaw-Knox Co., J. C. Kintz Co., National Soybean Crop Improvement Council, Central Scientific Co., William H. Banks Warehouses, Inc., A. T. Ferrell & Co., Prater Pulverizer Co., Barnard & Leas Manufacturing Co., Inc.

Urbana Laboratories, Soybean Digest, Archer-Daniels-Midland Co., Southeastern Products Corp., Honeymead Products Co., Butler Manufacturing Co., Fuel Economy Engineering, St. Regis Paper Co., Chase Bag Co. and Kennedy Car Liner & Bag Co., Inc.

Missouri Meetings

Another series of informational meetings on the Association program for growers in the Missouri-Arkansas-Tennessee Delta lands is planned for August 15-19.

Geo. M. Strayer, ASA secretary-treasurer, and Paul C. Hughes, Association field service director, both of Hudson, Iowa, will be present and make it worthwhile for soybean producers and others interested in soybeans to attend. They will thoroughly explain the Association program, which is being financed voluntarily by soybean growers through the payment of 20c per 100 bushels and collected through local elevators.

Following are the dates and places of the meetings and the local chairmen:

August 15, 8:30 p. m. daylight savings time—Vocational room, high school, St. Charles, Mo. H. V. Seeburger, St. Charles farmer, will be chairman.

August 16, 8 p. m.—Court house, Charleston, Mo. Chairman will be W. H. Haslaner, East Prairie, Mo., grain dealer.

August 18, 8 p. m.—Court house, Paragould, Ark., E. N. Sanders, county agent, chairman.

August 19, 8 p. m.—Court house, Ripley, Tenn., Anthony Fisher, Ripley farmer, chairman.

A meeting is also planned for Malden, Mo., August 17, but arrangements are not yet completed.

Full details concerning the meetings will be carried in local newspapers and by local radio stations.

GROWERS

YIELD CONTESTS FOR 1949

The 1949 Iowa soybean yield contest, the eighth of its kind to be held, has been announced by Joe L. Robinson, secretary of the Iowa Corn and Small Grain Growers Association, Ames, Iowa.

Sponsors of the state and 12 district contests in Iowa are the Corn and Small Grain Growers Association and the Iowa Soybean Processors Association. Local farm bureau units, elevators, Future Farmers of America chapters, chambers of commerce and service clubs are being encouraged to sponsor local contests again this year, according to Robinson.

To the state winner of the 1949 Iowa Master Soybean Growers contest will go $50, the John Sand trophy awarded annually by John Sand, Marcus, Iowa, soybean producer, and the title of Iowa Master Grower. Fifteen dollars and master soybean growers' medal will be given to district first place winners, with additional prizes for other place winners.

A master soybean growers' certificate will be awarded to the first place winner in each local contest in addition to prizes by local organizations, Robinson said.

Illinois Contest

The 9th annual Illinois 10-Acre Soybean Growing Contest is being held in 1949, the Illinois Crop Improvement Association has announced. Rules are the same as in 1948.

Awards will be based on the following four factors: yield per acre of No. 2 soybeans, economy of production, oil content of the beans and quality of beans produced. Winners will be awarded appropriate prizes, with the title of state champion going to the contestant with the highest total score.

Closing date for entries was June 20.

Indiana

The 10th annual Indiana 2-Acre Soybean Yield Contest is being held this year and is open to members of the Indiana Corn Growers Associa-

tion with dues paid by June 15, Secretary K. E. Beeson, Lafayette, has announced.

The best 2 acres from a field of at least 10 acres of yellow soybeans may be selected by the grower, or the yield of the entire measured field may be taken.

To the state winner goes the Roy Caldwell trophy to be retained for 1 year. If won three times by one grower it becomes his property. Bronze, silver, gold, green gold and rose gold medals will be awarded on the basis of yield up to and over 50 bushels per acre.

Missouri Program

A soybean achievement program for the 1949 crop is open to the farmers of eight prairie counties of northeast Missouri, according to John W. McClure, Audrain County extension agent, Mexico, Mo.

The program is sponsored by the MFA Cooperative Grain & Feed Co. at Mexico, the Missouri agricultural extension service and the vocational agriculture program. It is similar to the yield contests put on in that area in the past.

There are two classes. Class A is open to all farmers in the counties of Audrain, Monroe, Callaway, Randolph, Montgomery, Boone, Ralls and Pike. Class B is open to members of the Junior Farmers Association, vocational agriculture students, Future Farmers of America and 4-H Club members of the same counties.

The entrant with the highest per acre yield regardless of score, will be grand champion and receive a gold cup trophy and $100 in cash. Cup becomes permanent possession of contestant who wins it two years.

Class A and B first place winners will each receive $50 in cash; second place winners, $20. Entrants will be scored on use of lime, plant foods, inoculation, recommended varieties, cover crop and marketing as well as yield, but grand championship will be awarded for yield only.

Illinois Production

Champaign County, Ill., maintained its position as the nation's leading soybean county in 1948 with over a 3-million-bushel crop, Illinois Agricultural Statistics just issued by the Illinois Department of Agriculture reveals.

Champaign County's production in 1948 was 3,134,000 bushels, the only 3-million-bushel production by any one county in 2 years.

Christian County was second in Illinois in 1948, with 2,881,900 bushels; and Vermilion County was third with 2,704,400 bushels. Vermilion County ranked second among Illinois counties in 1947. Sangamon County was fourth with 2,581,200 bushels, Iroquois County was fifth with 2,113,300 bushels and Macoupin County was sixth with 2,098,800 bushels.

Twenty-seven Illinois counties produced over 1 million bushels of soybeans in 1948.

Over 3,271,000 acres were harvested for beans in 1948; 127,000 acres were harvested for hay; and 27,000 acres were plowed under or utilized for pasture.

Hogging Off Pays

Hogging-off corn and soybeans has been a most profitable farm enterprise in several sections of Louisiana for the past several years, report R. A. Wasson and A. D. Fitzgerald of Louisiana A & M College. The number of farmers going into

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OF A BETTER, EASIER CROP THIS SEASON— *And Every Season!*

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MM Modern Machines, Visionlined Tractors, and Power Units are *seasoned performers* in handling soy beans and all other crops . . . reducing your labor, increasing your profits, providing dependable, economical service from season to season, year after year! Quality MM farm implements assure better, faster, and more thorough work regardless of the task at hand. For all-round dependability, all through the year, MM is the choice of progressive farmers wherever the soil is tilled in the modern manner.

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MM's new hydraulic control mechanism raises or lowers farm implements automatically, permits pre-selecting or changing tool depth or height of cut, utilizes tested safety features for both operator and machines and frees operator's hands and feet for greater safety. Control lever is easy to reach, simple to use. Uni-Matic Power reduces fatigue, labor, and drudgery. Optional on MM's R, Z, U, and G Visionlined Tractors.

MM CULTIVATORS ON MM VISIONLINED TRACTORS KEEP SOY BEAN FIELDS CLEAN FOR MAXIMUM PRODUCTION.

MINNEAPOLIS-MOLINE
MINNEAPOLIS 1, MINNESOTA

this type of farming has increased rapidly.

Some of the advantages of hogging-off as pointed out by Wasson and Fitzgerald:

1. At present prices of corn and pork, hogging-off the corn and selling it as pork about doubles the cash corn price.

2. The labor needed for a corn crop is greatly reduced by eliminating harvest and storage.

3. It eliminates rat and weevil damage. This often amounts to 10 percent or more of the crop unless these pests are rigidly controlled.

4. Hogging-off corn and soybeans helps to balance the farm income between cash crops and livestock.

5. It is a soil-building, not a soil-depleting process. Thus, it fits well into a rotation with soil-depleting crops such as cotton or sugarcane.

6. The process is finished in ample time for following with winter legumes or oats.

7. It fits well into a mechanized farming program.

8. It gives finished hogs for the September market, the month of highest average hog prices.

The method, in brief:

1. Early planting of an adapted variety of hybrid corn interplanted with Ogden soybeans.

2. Using feeder pigs of good breeding and of the right type and quality to make rapid, efficient gains.

3. Having a sufficient number of good feeder pigs on hand at the time the corn and beans are first ready for grazing.

4. Providing free-choice animal protein and minerals, including salt during the grazing period.

5. Supplying plenty of fresh drinking water.

6. Providing enough shade and hog wallows to prevent overheating.

Extension Leaflet No. 21, Hogging-off Corn and Soybeans, may be obtained from the extension service of the college.

In Tennessee

The varieties S-100, Ogden and Volstate are recommended in Tennessee for seed and hay on the basis of their 3-year average performance, reports S. F. McMurray in Bulletin No. 208, "Variety Performance Trials of Corn, Oats, Barley, Wheat, Soybeans and Cotton."

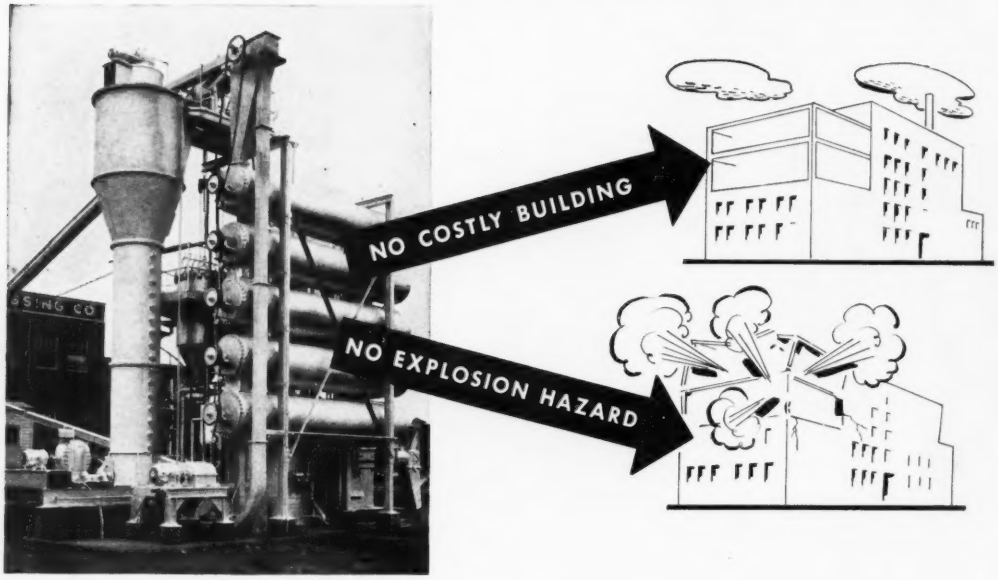
There is a difference of about 2 weeks in maturity between each two varieties. This makes it possible for a grower to distribute his soybean harvest over a month or more by using these varieties.

Ogden and Volstate, developed by the Tennessee Station, have long been recognized as superior varieties, not only by the farmers in Tennessee, but by soybean breeders in adjoining states. Both are excellent for hay and seed. The Ogden variety is green-seeded and is mid-season in maturity. Volstate is yellow-seeded and late. S-100, a development of the Missouri Station, has a slightly lower oil content than Ogden or Volstate, but because of its earliness has an important place in the Tennessee soybean program.

Returns from Contouring

Contour farming has paid off to the tune of $6 to $7 more profit per acre for corn or soybeans compared to the old-fashioned up-and-down-the-hill system. This does not include the value of eroded soil washed away, which can't be measured, say Illinois College of Agriculture agronomists.

ONLY ANDERSON
SOLVENT EXTRACTION UNITS
HAVE THESE TWO *Money-Saving* ADVANTAGES



SINCE Anderson Solvent Extraction units are outdoor installations, they have two money-saving advantages that every soybean processor planning new or additional solvent extraction facilities should consider. These two advantages are the elimination of both the need for a costly building and the explosion hazard.

Instead of a multi-story building with a large floor area or a similar building without side walls, the Anderson system requires no building for solvent extraction operations. Only a small building for preparation and handling the processed material is needed. Consequently, the amount of investment, maintenance and insurance is correspondingly less.

And only the Anderson Solvent Extraction Unit eliminates the ever present explosion hazards and reduces the fire hazard to a minimum . . . both of which have led to fires and loss of life. Like a gasoline refinery the Anderson unit is in the open . . . adjacent to the preparation building. Since there is no possible opportunity for a confinement of solvent vapors, there's no danger of explosion. In nearly all cases insurance rates are reduced.

These are but two of the many advantages the Anderson Solvent Extraction Units offer soybean processors. For complete details, write today.

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ANDERSON
EXPELLERS AND SOLVENT EXTRACTION EQUIPMENT

Minneapolis skyline as seen from the east bank of the Mississippi River.

on to MINNEAPOLIS - ST. PAUL

Three Big Days -- Sept. 6-7-8

Minneapolis and St. Paul, the friendly cities of the great upper Midwest, welcome you to the American Soybean Association's 29th annual convention September 6-7-8.

It is appropriate that the convention will be held in Minneapolis—for here are located some of the nation's largest soybean processors. Some 7 million bushels of soybeans are processed annually in Minneapolis. In addition, the city contains some of the finest soybean research laboratories in the nation.

The rich agricultural areas south and west of Minneapolis are ideally suited to soybean production—last year Minnesota ranked fifth among the states in production with a total output of more than 15 million bushels. About half of the soybeans grown in Minnesota are processed in Minneapolis.

Soybean acreage and production have increased nearly 400 percent in Minnesota during the past 5 years. In 1944, about 5 million bushels of soybeans were produced on 263,000 acres. In 1948, by contrast, 15½ million bushels were produced on 850,000 acres.

When you attend the ASA convention, you'll find Minneapolis a beautiful and progressive city. More than a half million men, women, and children have made it a sparkling gem in the "Land of the Skyblue Waters."

The natural beauty of Minneapolis is breathtaking. The mighty Mississippi, famed the world over as the "Father of Waters," flows sedately through the city, over historic St. Anthony Falls and through gorges cut deep by the centuries.

Because of these unparalleled attractions, Minneapolis is a mecca for tourists and convention delegates. The city is the hub of conventions, drawing delegates from all parts of the United States. Some 300 conventions are held in Minneapolis each year.

The business district of Minneapolis is conveniently laid out. Hennepin Avenue often called the "Broadway of Minneapolis," was named after Father Hennepin, discoverer of the historic Falls of the St. Anthony. Many of the city's theatres and amusement spots extend along Hennepin Avenue — at night the thoroughfare is ablaze with color. Nicollet Avenue, so called in honor of another distinguished pioneer, is justly referred to as the "Fifth Avenue of the upper Midwest." Many

Beautiful Minnehaha Falls in Minneapolis, immortalized by Longfellow.

FOR VACATION INFORMATION

For information on the best fishing and vacationing sports in Minnesota and accommodations, write:

Verne E. Joslin, director Minnesota Department of Business Research and Development, State Capitol, St. Paul 1, Minn.

Julius Pealt, Minneapolis Convention and Visitors Bureau, Pillsbury Building, Minneapolis, Minn.

shops and retail stores on Nicollet Avenue offer as fine a selection of merchandise as can be found in any other metropolitan center in the United States.

A city of teeming enterprise, Minneapolis boasts a wholesale output volume exceeding a billion and a half dollars annually. Minneapolis is the 19th largest in the United States in value of manufactured products according to the last census.

Soybean processing comes naturally to Minneapolis, a world-famed grain terminal. For nearly 70 years, the mills and millers of Minneapolis have been known throughout the world as prime producers of flour. It is significant that a flour mill was one of the first structures to be erected on the banks of the beautiful Mississippi River in that little settlement later to become the city of Minneapolis.

The manufacture of linseed products is also a leading Minneapolis industry. The mills of Minneapolis have facilities for processing millions of bushels of flaxseed into linseed oil and cake.

Minneapolis has long been an important producer of agricultural machinery. Construction, equipment pumps, refrigeration and air conditioning equipment and outboard motors are among many other machines manufactured in the city.

A variety of electrical machinery and appliances is made in Minneapolis. Motors, generators, power plants, transformers, battery chargers, and controllers are among the products made in Minneapolis factories. Minneapolis is reputed to be the fifth largest printing and publishing center in the United States. Often called the "Lingerie Capitol of the World," Minneapolis is an important apparel manufacturing center.

To service these thriving industries, a vast network of railroad, airlines, motor truck lines and bus lines link Minneapolis with the nation.

Five airlines provide daily service to far-away points. Northwest Airlines' recently inaugurated service to the Orient has made Minneapolis one of the great inland world ports of the nation.

Minneapolis is at the head of Mississippi River navigation. It maintains a regular barge service to and from New Orleans and Ohio river ports during the navigation season. With the new 10 million dollar Upper River Harbor project now underway, Minneapolis looks forward to becoming one of the nation's busiest river ports.

Perhaps the cultural aspect of Minneapolis is best exemplified by the world renowned Minneapolis Symphony Orchestra. This organization—one of the most traveled symphonies in the United States—has brought more fame to Minneapolis than any other cultural institution. The Minneapolis Symphony Orchestra has been recognized throughout Europe as one of the five top orchestras in the world.

The Minneapolis Aquatennial, known up and down and across the nation as "the world's greatest summer festival," provides more colorful pageantry than any other event in the nation. The Aqua Follies, one of the notable events of the Aquatennial, combine an original format of Olympic swimming and diving champions with stage and concert stars.

Another attraction featured annually in Minneapolis is the world famous Shipstad and Johnson Ice Follies which began in Minneapolis 17 years ago. Each year the celebrated ice extravaganza brings new innovations in skating and colorful lighting.

St. Paul

St. Paul, Minneapolis' sister city of 355,000 people and the capital of Minnesota, sits picturesquely along the banks of the Mississippi River. With its long history of progressive growth, it offers to the traveler something different—a great metropolitan center in a setting of Old World quaintness.

St. Paul is an important manufacturing, wholesale and retail center. Located there are: the nation's largest law book publishers, one of the five largest publishers of farm periodicals, the nation's largest publisher of advertising specialties, the nation's largest manufacturer of refrigerators, headquarters for one of the nation's largest manufacturers of lumber and other forest products, the nation's largest manufacturer of surface-coated abrasives and pressure-sensitive tapes, and many other plants with exceptionally high national rank.

St. Paul is the home of America's greatest winter sports spectacle—the St. Paul Winter Carnival, the "Mardi Gras" of the North. Here, for 9 days each winter, King Boreas, ruler of the North Wind, and his Queen reign supreme over Minnesota's capital city. Twenty-five thousand colorfully costumed marchers start the festivities off with a gala parade.

Eight accredited colleges and universities make St. Paul one of the nation's leading educational centers. The University of Minnesota has expanded unbelievably during and since the war. More than 25,000 students are enrolled in day school and an additional 10,000 attend evening classes and study correspondence courses. Development of the University during the past 2 decades has placed it among the leading educational institutions in the nation.

Field Trip

Soybeans grow very well on Minnesota soils, as convention visitors will see when they pass through southern Minnesota and when they tour the state's experimental field

St. Paul's city hall and Ramsey County court house is acknowledged an outstanding example of modern American architecture.

Dr. J. W. Lambert, soybean breeder at the Minnesota Agricultural Experiment Station, in the soybean breeding nursery.

trials as guests of the Minnesota Agricultural Experiment Station, University Farm, St. Paul. Work conducted by the division of agronomy and plant genetics and the division of plant pathology will be on display.

Minnesota farmers have found that they can produce soybeans. For many years a few men, including R. E. Hodgson, superintendent of the Waseca Branch Experiment Station, have been demonstrating just how well soybeans will grow on Minnesota soils.

During their tour of field plantings on the morning of September 8, visitors will have an opportunity to observe and study yield trials, the experimental breeding nursery, observation rows, date of planting experiments, and plant pathology field tests.

Yield Trials

Three different yield trial experiments will be seen according to Dr. J. W. Lambert, soybean breeder at the University of Minnesota. The first will be on named varieties. Sixteen named varieties of medium early to very early maturing beans are being grown in replicated three-row plots. These are for the most part, varieties which are being grown to some extent in farmer's fields in this maturity area.

The second group of trials will be on promising selections from the cross (Lincoln X Richland) Lincoln. Thirty-seven early strains from this cross are being tested in replicated three-row plots. These strains have been previously tested in single row plots at two or three locations and have been found to be relatively good agronomically and high in oil content.

The third group of yield plots will be the uniform regional trials. About 40 strains are being tested in replicated single-row plots in cooperation with the U. S. Regional Soybean Laboratory at Urbana, Ill. They are mainly strains submitted by breeders at the several experiment stations of the North Central Region of the United States.

Breeding Nursery

About 1,000 individual progenies of F_4 plants are being grown in 8-foot rows for further selection. Nine different crosses are represented in this material. Selections in previous generations have been on the basis of earliness and desirable plant characters. Desirable-appearing rows will be selected for placing in yield trials in 1950.

Observation Rows

Two different groups of observation row plantings will be on display, according to Dr. Lambert.

In one instance, 70 strains, including several from each of the maturity groups 0-VIII are being grown in rod rows especially for display purposes during the convention. Group 0 strains, such as Flambeau, are extremely early and can be planted for seed production as far north as Crookston, Minn., which is nearly to the Canadian line. Group VIII strains such as Cherokee, are extremely late and are grown in the Deep South. The other maturity groups range in between these extremes.

In the other observation rows are 35 early strains developed in Germany. They will be under observation for the first time in Minnesota.

Date of Planting

A date of planting study has been initiated at University Farm this year. The study involves 10 varieties having a considerable range of maturity. These were planted in replicated plots at three dates. The first date was in early May, the second in late May (regular planting time), and the third in early June.

Plant Pathology

During the tour of the plant pathology plots, visitors will see a test on pathogenicity of races of *Rhizoctonia solani*, seed treatment plots, and the seven-year-old soybean disease garden. This work is under the direction of Assistant Professor of Plant Pathology, M. F. Kernkamp, and John W. Gibler, agent, Division of Forage Crops and Diseases, U. S. Department of Agriculture.

One experiment will be a test of pathogenicity of races of *Rhizoctonia solani* on soybeans, an organism which causes root rot and seedling blight. Another will be an experiment to test the feasibility of seed treatment applied by the pelleting method. Four different chemicals are being tested in plots inoculated with *Rhizoctonia solani*. Another experiment to be viewed will be on the rate of seed treatment by the pelleting method. Three rates of application are being tested.

Still another observation will be on a test of effectiveness of seed treatment on farmer's seed samples. Kernkamp reports that some of the seed lots received this year were severely mechanically injured in harvesting in 1948, and that they have responded extremely well to seed treatment in greenhouse tests. These same seed lots are being tested in the field this summer.

A fifth test is on the resistance of soybean selections to *Rhizoctonia solani*. Two years ago breeding material in the F_3 generation was given a severe test for resistance to this disease in the greenhouse. Most of the plants were killed, but a few survived. The survivors were increased in 1948 and are now in the F_7 generation. This material is being tested for resistance to *Rhizoctonia solani* in inoculated plots in the field this season.

What will probably be one of the

(*Continued on page 38*)

Soybeans in the Texas Blacklands

You see a portion of the soybean breeding nursery at the Texas Research Foundation. Picture was taken July 27 a year ago.

By ROBERT R. KALTON

Associate agronomist, Texas Research Foundation, Renner, Texas.

Reprinted from the Cotton Gin and Oil Mill Press.

SOYBEANS HAVE never been an important crop in Texas. As shown in the table, the biggest crop ever produced was 225,000 bushels in 1942. Numerous attempts have been made to grow this crop commercially during the last 10 to 15 years in various parts of the state but very few growers have met with any degree of success.

Experimental work on soybeans has been under way for some time. Most substations of the Texas Agricultural Experiment Station have carried out variety trials and cultural studies for varying periods of years. Although a few stations report on work conducted as early as World War I, most of the information on seed production was obtained since the early 1930's. Depending on season and locality, yields in these tests ranged from 0 to over 40 bushels per acre. The majority, however, fell in the 0 to 10 or 15 bushel class. Instances of complete test failures were quite frequent. In all, several hundred varieties and strains were tested, but none was found that consistently produced good yields of high quality seed.

As a potential new oilseed crop for Texas, the soybean has several desirable features in addition to the fact that cotton oil mills provide a ready means for processing the seed and markets for the oil and meal are well established. Being a legume, it does not deplete the soil of nitrogen when properly inoculated and only the seed is removed from the land. The deep tap roots are known to exert a beneficial loosening effect on heavy soils. Finally the crop is easy to grow and can be completely mechanized with available cotton and small grain machinery. On the deficit side of the ledger are the inconsistent yields of generally poor quality seed, loss of seed by shattering at maturity, and susceptibility to damage from certain insects and diseases and from rabbits.

In recognition of these advantages and disadvantages and of previous results, the Texas Research Foundation has oriented its soybean program along two main lines, cultural research and breeding research. Some studies on insect control, seed inoculation, seed treatment, and fertilization are being made, but major attention in cultural research is centered on the effect of date of planting on yield and other important characteristics. The first date of planting test was conducted in 1946 and consisted of four varieties and four dates. It was expanded to seven varieties and five dates in 1947 and to nine varieties and six dates in 1948. The period covered by the seeding dates extended from late March to early July. Varieties that were used ranged in maturity adaptation from the northern Cornbelt to the deep South and included Monroe, Lincoln, Chief, S-100, Ogden, Roanoke, CNS, Acadian and Yelnando. Although the results thus far are still not conclusive, some of the more interesting features bear mentioning.

Soybean Production in Texas as Compared with the Total for the United States from 1934 to 1944.[1]

	Thousands of Bushels	
Year	United States	Texas
1934	23,157	17
1935	48,961	20
1936	33,721	16
1937	46,164	18
1938	61,906	18
1939	90,141	20
1940	78,045	28
1941	107,197	33
1942	187,524	225
1943	190,133	188
1944	191,958	24

(No production figures available for Texas after 1944). Average per acre yields for Texas (1934-1943): 8.5 bushels. Average per acre yields for United States (1934-1943): 17.6 bushels.

[1]Taken from: Soybeans, Production, Farm Disposition, and Value, by States, 1924-1944. U.S.D.A., Bureau Agricultural Economics, October, 1947.

Early Planting

As was expected, seed yields were quite erratic due to seasonal fluctuations in the environment, particularly rainfall. Generally, however, all early varieties (Monroe, Lincoln, Chief and S-100) gave the highest yields when planted early—in late March or April. Seed quality was also somewhat better and damage from cotton root rot the least with the early plantings. When the same varieties were planted in May and June, seed setting was prolonged into July and August—the hottest and driest part of the summer. Consequently, seed quality and yields were poorer and damage from root rot greater.

Results for the later varieties (Ogden, Roanoke, CNS, Acadian and

Yelando) were considerably different. All March, April and May plantings were heavily damaged by cotton root rot. Mid-June and early July plantings, on the other hand, showed little or no damage. Seed quality of these varieties tended to improve with each later date, as seed setting was delayed to the cooler weather of fall. Yields at all dates were very poor in 1946 and 1948, due to the extended summer droughts. In 1947, however, late summer and fall rains resulted in relatively good yields (15 to 30 bushels per acre) of high quality seed with all late varieties.

Significantly, yields of the mid-June plantings were as good or better than the earlier dates. July plantings were generally low in yield due to poor stands. Everything considered, these results indicate that either early planting of early varieties or late planting of late varieties offers the best opportunity of solving the root rot, seed quality and yield problems from a cultural standpoint in the Texas Blacklands.

Time of planting is also important in regard to other factors. Leaf diseases and certain insects such as blister beetles, grasshoppers and stink bugs caused varying degrees of injury to the growing plants. It was observed in both 1947 and 1948 that June and July plantings of late varieties were damaged least by insects and leaf diseases. Early varieties showed the least insect injury when planted early. Another advantage of late planting that should be mentioned is weed control. Delayed seeding makes it possible to kill many of the weeds before planting. In the late 1948 nurseries, which were planted in the latter part of June, two timely cultivations with the spring-tooth harrow before and two cultivations with the regular tractor cultivator after planting resulted in almost complete control of weeds.

Breeding

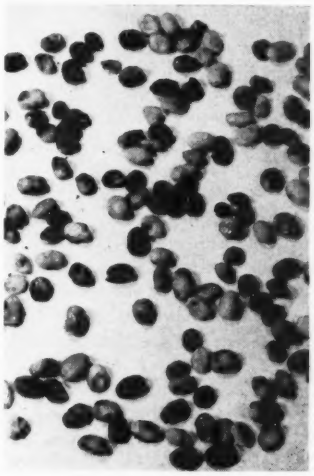
Solutions to the many problems encountered with soybeans, however, cannot be obtained by cultural investigations alone. Possibilities for improvement through breeding also merit consideration. Varieties and strains of this crop differ immensely in such characteristics as plant height, seed quality, shattering resistance, maturity, yield, etc.

In the Texas Blacklands plant height is an especially important problem with very early and late plantings because of the length of day (photoperiodic) response. Whereas many varieties grow from 30 to 40 inches tall when planted in May, they grow only 10 to 20 inches tall from late March or early July seedings. Heights much shorter than 2 feet greatly increase difficulties in combining.

Of the many varieties thus far tested, very few have produced seed of good quality under all conditions. Seed quality of early varieties always has been poor. Seed shattering is another undesirable feature of many varieties that is common in this area. The primary objective of the improvement program is to determine if these undesirable features can be overcome by breeding.

Attempts to make improvements through introduction of varieties and strains from other states generally have been unsuccessful. During the last four years the U. S. Regional Soybean Laboratory supplied seed of well over 1,000 different types for testing purposes. Included were most of the named varieties in the United States and a large number of original plant introductions. Except for 1947, when some strains yielded up to 30 bushels per acre, results in these trial plantings were generally poor. A few strains were found which exhibited several desirable features such as shattering resistance, tall stature, and good seed quality, but none was satisfactory in all respects.

This is what happens when a Cornbelt variety, Lincoln, is planted in May in Texas. Seed is set during late July and August, the hottest and driest part of the summer. Practically all of it is badly damaged. Certain late varieties when planted in June or early July produce very good quality seed during the cooler fall weather.



Considerably more progress was made by selection in segregating populations of crosses. The procedure used was to obtain bulk F_3 and F_4 populations of many crosses and grow them separately for at least 2 years for plant selection purposes under local environmental conditions. About 100 different crosses were grown in this manner in 1946, 1947 and 1948, and many selections made. Approximately 350 of these selections were planted in 1948 in late June. Despite the prolonged summer and fall drought and an abnormally early freeze, results were very encouraging. Some selections grew from 30 to 40 inches tall, yielded 10 to 12 bushels per acre, and produced seed of very high quality. The best strains in the Uniform Variety Tests of the U. S. Regional Soybean Laboratory in the same field yielded only 4 to 5 bushels per acre and grew only 20 to 24 inches tall. Seed quality and shattering resistance in the latter strains also were poorer. Thus, it would appear that selection in hybrid populations of crosses offers a possible means for solving the plant height, seed quality, and seed shattering problems with soybeans in this area.

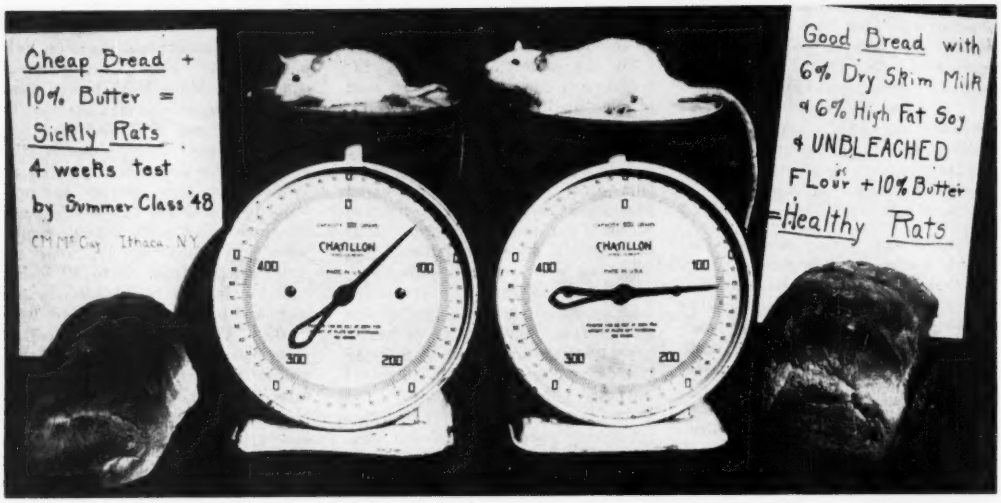
1949 Trials

Some of the better selections mentioned in the previous paragraph will be tested in replicated trials in 1949 with such varieties as Ogden, Volstate, Roanoke, CNS and others included for comparison. These varieties are among the best now available for grain production in the South and are represented as parents of crosses from which many of the selections were derived. This test, therefore, will provide an opportunity to determine the advancement that can be made by carrying on breeding work under Blackland conditions. If some of the new strains really prove superior, they will be tested in other areas of the state in the future. It may be that in parts of east Texas, for example, where root rot is not a problem and rainfall more plentiful, they might do even better than in the Blacklands.

It has been pointed out that solutions to many of the problems confronting soybean production in the Texas Blacklands seem possible through a coordinated problem of cultural and breeding research. Whether or not yields can be stepped up to a profitable level by such a program cannot be ascertained at

(Continued on page 32)

SOY MAKES BREAD WORTH EATING!



Rats grow better on the soya loaf, experiments by Dr. McCay show.

By CLIVE M. McCAY

Professor of Nutrition
Cornell University, Ithaca, N. Y.

DURING THE PAST year interest in better bread has developed in the city of Ithaca, N. Y. Slightly more than a year ago a small local bakery put into production a bread for the cooperative store. This bread, made from unbleached flour, was named "Triple Rich" because it contained 6 percent high fat soya flour, 6 percent nonfat dry milk solids, and 2 percent wheat germ. This bread has been restricted to three outlets, namely, the two cooperative stores and the bakeshop producing it. The managing board of the co-op stores has limited these outlets thus far because the bread attracts customers.

This bread retails at 20 cents per pound loaf, although the cost of ingredients amounts to less than a cent per pound more than the cost of those in competing commercial varieties of bread. The co-op store takes the same margin of profits from this bread as it does from these other varieties. The additional margin is given to the baker, since the store believes bakers must have more profit incentive if they are expected to produce bread of higher quality.

Recent surveys have indicated that a substantial fraction of the American public has a rather low opinion of bread as a foodstuff. This has led to a shrinkage in the use of bread for several decades. During the past 3 years the public has been further jolted in its confidence in products made of flour by news stories telling of research in which dogs were made to develop epileptic fits by feeding them bread made of flour treated with nitrogen trichloride. After July 1, 1949, however, the public will have no further fear of possible effects from this compound, since its use is to be made illegal and other chemical agents, such as alum, benzoyl peroxide, and chlorine dioxide, will be substituted for nitrogen trichloride in conditioning wheat flour.

● *People at Ithaca, N. Y., buy all of the new soy loaf they can get—proving that there is a sale for good bread. The author, one of the nation's top-ranking nutritionists, has been engaged in nutritional research at Cornell University ever since 1927, except for 3 years during World War II when he did the same kind of work for the U. S. Navy.*

In spite of the decline in the use of bread as food, cereals still provide the American public with more than one-fourth of their calories and protein. No one can estimate how far bread might return in popular favor if the quality of commercial breads were improved. Families using the new bread in Ithaca report that much more is eaten. In fact, one mother of five children quit buying the bread because she said the family bread bill had risen too much, due to increased consumption.

The new bread being sold in Ithaca was an outgrowth of developments during the past year in the state mental hospitals. Rising food costs have obliged the State of New York during the past few years to scrutinize the food served in mental hospitals in the interest of maintaining previous high standards. Commissioner Frederick MacCurdy and his dietitian, Katherine Flack, determined that bread should be improved, since large numbers of the older patients seemed to prefer bread as their principle foodstuff. About 40 percent of the more than 100,000 patients that must be provided for by the New York Department of Mental

One of the Co-Op food stores at Ithaca where the soya loaf is sold.

Hygiene are living in the later years of life when teeth and other problems make bread a very acceptable food.

In order to make bread as adequate as possible in protein, a formula was adopted which contained 6 percent high fat soya flour and 8 percent dry milk solids. Through the cooperative efforts of the research division of the American Dry Milk Institute, especially through the labors of baking technologist J. A. Silva, Jr., the bread formula was adapted to the equipment of typical institutions. Bakers were given special training in the use of the new formula. The change to the new bread in the 27 institutions was made without difficulty.

The rumor factory in such places as Washington, D. C., was set going as usual. Instead of the trite phrase of "coolie diet", which was used before when New York state stimulated the use of soy products, was heard the rumor that this new bread would mold rapidly. Thus far, no such difficulty has been encountered either in institutions or Ithaca.

The Ithaca bread was produced after the mental hospital bread had been started and took advantage of experience in these hospitals.

Divided Opinions

Nutritionists are divided into three groups in relation to the improvement of bread. The largest group pays little attention to the matter. A second group assumes that bread is poor and is going to remain so. Therefore, they advise people to pay attention to the remainder of the diet and regard bread as a cheap source of calories. The author belongs to the third group that believes that every food item, such as bread, should have as high a nutritive value as possible.

This latter group believes that more than 10 million people in the nation who are over 65 years of age lean heavily on bread as a major food. Many of this older group cannot afford common high-protein products, such as meat, eggs, and fresh milk. Furthermore, large numbers of the low income group in America must use primary foods such as cereals for their major source of protein. This was driven home to the author recently when his two Christmas guests who were underfed children from the slums of New York told of the food they get for the 39 dollars per month of relief money which the mother and two children pay for room and board on Third Avenue. High quality bread is needed for school lunches.

Tests on Rats

The author has run growth tests with young albino rats upon many of the common commercial breads sold in Ithaca. None will support growth when supplemented with only 10 percent of margarine or butter. The new bread containing soya flour, dry milk, and wheat germ supports very good growth when tested under the same conditions. This indicates that bread can have quality to provide for the growth of children, as well as the maintenance of the aged.

No one can foretell the future of the bread. Little pressure has been exerted to sell it in Ithaca because the baker's facilities for production are limited. The major problem seems to be to teach the housewife that bread can be made much better and that it opens for her such rich protein concentrates as soya flour and dry milk solids which are seldom available in ordinary retail channels. The teaching of the housewife needs to center on the lesson that she gets a big value for the additional penny she pays per pound of bread. With this teaching needs to go an open formula statement on every loaf of bread telling the housewife what she is getting so that she can be certain she is not wasting her pennies for food.

SOYBEAN SHOW IN JAPAN

A soybean and oil and fat exhibition was sponsored by the Japanese Soybean Association in cooperation with the Japanese Oil and Fats Association and the Oil and Fat Rehabilitation Council at the Mitsukoshi Department Store in Tokyo from February 23 to March 6, reports T. Kurakake of the Japanese Soybean Association.

The exhibition was very successful with 8,000 to 10,000 people viewing the exhibits, writes Kurakake.

The exhibition consisted of information on domestic and foreign soybeans and fats and oils and exhibits submitted by about 20 organizations such as the Shoyu (soy sauce) Association, Miso (bean paste) Association, Oil Mill Association, Oil and Fat Processed Goods Association, etc.

Visitors were chiefly housewives but there were also a large number of students. Many farmers from neighboring prefectures inquired about varieties, cultivation of soybeans and disease control. In order to encourage the growing of soybeans in home gardens, free seeds were distributed to all visitors.

The exhibition was such a success that it will be moved to Hokkaido and Nagoya and repeated there, according to Kurakake.

"Protein and fats are the two nutrients which are absolutely necessary to the Japanese people but which are in shortest supply," he writes. "The Japanese people are inclined to lean toward a 'full stomach' diet with no thought given to protein and fats. Consequently, this rehabilitation can be accomplished only by fuller understanding of the importance of soybeans and fats and oil."

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NEW SOY SAUCE METHOD

A new method for the production of synthetic soy sauce, cutting fermentation time from years to weeks, has been developed at Decatur, Ill., by Roy F. Larson, Robert Winston Liggett, and Wayne C. Mussulman.

The method, described in U. S. Patent 2459563, assigned to the A. E. Staley Manufacturing Co., substitutes fermentation of a single ingredient for the fermentation of the entire product required in the making of genuine soy sauce.

The results, the inventors claim, approach the characteristic odor and flavor of genuine soy sauce more closely than do soy-type condiments prepared by chemical methods alone.

MORE BEANS PROCESSED BY SOLVENTS

The U. S. Department of Agriculture has announced results of a survey conducted for the Production and Marketing Administration by the Bureau of the Census, Department of Commerce, to determine the quantity of soybeans processed by each of the three methods, screw press, solvent extraction, and hydraulic press, in recent years.

The survey shows that soybeans processed by the solvent extraction method from October 1, 1947 to September 30, 1948, increased materially from previous years. A total of 61 million bushels, amounting to about 38 percent of the total crush during this period was processed by the solvent extraction method as contrasted with about 45 million bushels, or 27 to 28 percent of the total crush, processed by that method in each of the two preceding crop years.

Soybeans processed by the screw press method in October 1947-September 1948 amounted to about 88 million bushels, or 54 percent of the total crush, whereas 109 million bushels (64 percent of the total crush) were processed by screw presses in 1946-47.

A total of 13 million bushels was processed by the hydraulic press method in 1947-48 compared with 16 millions a year earlier.

The survey also indicates that for 1947-48 the crude oil yield of soybeans processed by the solvent extraction method was approximately 10.7 pounds per bushel as compared with 8.9 pounds from the screw press method and 8.5 pounds from the hydraulic press process. Oil yield information by method of processing was not obtained for years prior to 1947-48.

Department of Agriculture officials pointed out that the "bushels crushed" for 1946-47 and 1947-48 and "crude oil produced" for 1947-48 differ somewhat from figures previously reported by the Bureau of the Census. These differences arise from differences in the survey reports from some processors as compared with regular reports made to the Census.

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WINS TOP FILM AWARD

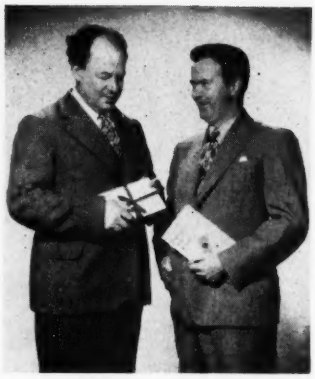
The Victory Mills, Ltd., film on soybeans, "Beans of Bounty," has shared top honors in the non-theatrical class of the Canadian Film Awards, it is announced.

To win the award, "Beans of Bounty" competed against a large number of commercial films, some of which cost twice as much to produce. The judges were impressed with the film because of "its integrity, its quiet efficiency, economy of music and technical tricks, well-planned visuals and tight script. It seems to meet its objective without a single wasted word or shot."

"Beans of Bounty," a 20-minute sound and color film, tells the story of soybeans from planting through cultivating and harvesting to processing. From there, the products of the soybean are pictured as they are used in the manufacture of scores of consumer products. The camera then sweeps the shelves in grocery and drug stores, focusing on the items that employ the products of the versatile soybean. Finally, the story swings back to the farm and shows how the soybean benefits the farmer.

The effectiveness of distribution of the film is indicated by the fact that Canadian soybean production almost doubled last year.

Ten prints were made of "Beans of Bounty." Distribution took place through three channels: meetings conducted by Victory Mills' two field men; National Film Board circuits; and private showings by interested parties.



Carl Rogers, vice president of Victory Mills, Ltd., discusses with Oscar Burritt of Shelley Films the achievement of the Victory Mills' film, Beans of Bounty, in sharing top honors in the non-theatrical class of Canadian Film Awards.

The most effective method was through Victory Mills' agronomy department, which set up and operated its own projection equipment. The two men set up two carefully planned circuits. Selecting a town or village in localities ideal for soybean growing, they would rent a hall for a single showing and advertise the event in local newspapers and handbills.

Audiences ran from 50 to 300 interested farmers at each meeting. In this way the film was shown in as many as six towns by each agronomy expert in a single week. Between early February and the end of May, 1948, thousands of farmers were personally contacted.

The Canadian National Film Board also showed "Beans of Bounty" to over 10,000 farmers in 10 counties in southwestern Ontario. Showings to private parties included agricultural colleges and schools, special farm groups and other interested organizations. Two prints were reserved for the private showings and they were in constant use.

"Beans of Bounty" is available for group showings through the executive offices of the American Soybean Association, Hudson, Iowa.

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Philippine soybean output for 1948 is estimated at about 18,000 bushels, 65 percent more than the output in 1939, reports U. S. Department of Agriculture's Foreign Crops and Markets.

Soybeans: Quantities Crushed by Types of Processing Equipment, Crop Years 1945-47; Oil Produced and Oil Yield Per Bushels for Each Process, Crop Year 1947

Oct. 1 - Sept. 30 Crop Year	Screw Press process 1,000 bu.	Percent of total	Solvent Extraction process 1,000 bu.	Percent of total	Hydraulic Press process 1,000 bu.	Percent of total	Total 1,000 bu.
1945-46	102,442	64.2	44,907	28.2	12,111	7.6	159,460
1946-47	108,744	63.9	45,224	26.6	16,271	9.5	170,239
1947-48	88,233	54.4	61,000	37.6	12,933	8.0	162,166
	Crude oil produced						
	1,000 lbs.	Percent of total	1,000 lbs.	Percent of total	1,000 lbs.	Percent of total	1,000 lbs.
1947-48	782,135	50.7	650,629	42.2	109,362	7.1	1,542,126
	Oil yield per bushel						
	Pounds		Pounds		Pounds		Pounds (Average for crop)
1947-48	8.86		10.67		8.46		9.51

Compiled from data collected by the Bureau of the Census.

PREDICTS MORE PRICE DECLINES SOON

Sharp price declines for numerous commodities should be expected soon, say the editors of the 1949 Commodity Year Book, published recently by the Commodity Research Bureau, Inc. Certain commodities still relatively high priced, such as building materials and some metal products, may be expected to follow the price decline pattern established by foods, textiles, and others which already have had substantial postwar price contractions, according to the 1949 edition of this noted "bible" of the commodity trades.

This year's edition of Commodity Year Book features several original research studies in addition to the annual statistical and chart compilations for each of the basic commodities of agriculture and industry. The study which discusses major price trends is entitled, "How Commodity Prices Move."

Commodities that lag but eventually follow the others include metal products and building materials. The survey shows historical precedents and discusses the current phases of the post war commodity decline. Other feature studies include a comprehensive analysis of modern hedging practices on the futures exchanges. This study warns that hedging is not always advisable and that there are numerous pitfalls to be avoided by companies who use the futures markets for hedging to minimize price risks.

Considerable space in the new 1949 Year Book is devoted to study and analysis of government price support programs and parity prices.

Following the section devoted to special studies, the Year Book contains 85 separate sections, each covering a different major raw or semi-finished product, including soybeans. Each section contains statistical records of production, consumption and prices plus interesting price charts and supplementary editorial data on facts about sources of supply, end uses, governmental influences, price motivating factors and other data.

COMMODITY YEAR BOOK—1949, published by Commodity Research Bureau, Inc., 82 Beaver St., New York 5, N. Y., 472 pages. Price: $10.

New A-D-M Book

Cracking The Soybean, a new book issued by Archer-Daniels-Midland Co., tells the story of the soya products that have become increasingly important to business and industry.

Tracing the history of the soybean since its "re-discovery" in America within the last 30 years, the book outlines the tremendously increased production and the technical progress made in extracting and refining the oil.

In describing the industrial applications of soybeans, the book deals in part with the influence of soybean oils in the manufacture of paints, varnishes, lacquers and enamels. Included is information on remarkable new paint-making materials composed of soybean oils combined with chemicals developed during World War II. Many other industries that have converted to soybean oil formulation are listed.

The book points out the many uses of edible soybean oil today, in vegetable shortenings, margarines, salad dressings and other edible products. Also detailed is the expanding list of high protein foods from soybean solids. New uses for soybean oil meal are also enumerated.

To obtain copies, write Archer-Daniels-Midland Co., 600 Roanoke Building, Minneapolis 2, Minn.

Books by Fairchilds

When Charles Scribner's Sons bring out a new book by David Fairchild, famed plant explorer for the U. S. Department of Agriculture, it is an event.

His quiet humor, simple sincerity and touches of philosophy have found him a wide audience among plant lovers. His books are all filled with fine photographs, and these would make a volume in themselves.

"The World Was My Garden" was Fairchild's first and most ambitious attempt, written when he thought he had completed his active work as a plant explorer. It was published in 1938 and was voted the discovery of the year by booksellers.

But later he had an opportunity to visit the Moluccas, the "Spice Islands" of antiquity, in a Chinese junk. "Garden Islands of the East" was the result, even though the trip was cut short by the World War.

"The World Grows Round My Door" was published in 1947, and describes the Fairchild home, "The Kampong," in south Florida. The world literally does grow around his door, for here are the plants and trees that he introduced into the U. S. in the course of 50 years.

Now Scribner's has brought out a new book, "East of the Andies and West of Nowhere," this time by Fairchild's daughter, Nancy Bell Bates. She has inherited her father's zest for new adventures and places, as is apparent in this description of her life on the edge of the vast Colombian llanos.

THE WORLD WAS MY GARDEN, 494 pages, $5; GARDEN ISLANDS OF THE GREAT EAST, 240 pages, $5; THE WORLD GROWS ROUND MY DOOR, 343 pages, $5, all by David Fairchild; and EAST OF THE ANDIES AND WEST OF NOWHERE, 226 pages, $3.50, by Nancy Bell Bates. Published by Charles Scribner's Sons, New York.

Rock Falls, Ill., Soybean Plant

The three-expeller soybean processing plant and storage bins of the Sterling Soybean Co., Inc., at Rock Falls, Ill. Storage capacity is 300,000 bushels. This firm also has facilities for grain storage and drying.

BOOKS

FACTORS CONSIDERED IN

Purchasing Soybeans

By DALE W. McMILLEN, JR.

Vice Chairman of the Board Central Soya, Inc., Fort Wayne, Ind.

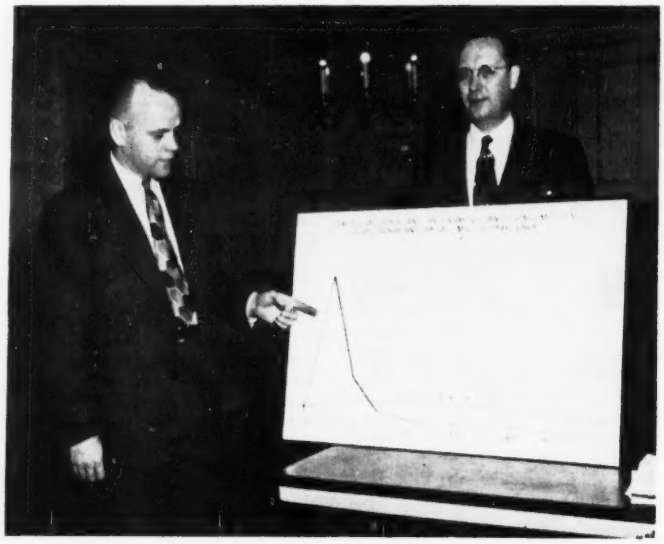
FACTORS considered in purchasing soybeans are one of the most interesting and intriguing, and yet complex problems which confront any soybean processor. There are so many factors involved which are ever-changing that it is quite difficult to attempt to organize one's thoughts and to intelligently put them down in an understandable manner.

However, I will attempt to do my best to present the picture as we, one segment of a rapidly changing industry, see it.

Here is a chart (right) showing sale of soybeans by farmers, and consumption of soybeans by oil mills for the 1946 crop of soybeans. This chart was one of the many such charts and statistics compiled by the Farm Credit Administration, U. S. Department of Agriculture and printed November, 1943. This chart for the 1946 crop of beans, while it may not exactly be representative of the average year, does, in general, portray the problem very vividly.

I believe that the sales of soybeans by farmers would represent pretty closely the purchases by processors. In fact, for general purposes we can take this chart to represent the average purchases of soybeans by the processing industry. This chart represents the basic problem of the soybean industry in its accumulation of raw material for processing throughout the year.

In my opinion there is a basic difference between a small operation and an operation of a processor who crushes, let us say, 10 million bushels of soybeans per year. The smaller operator—of which type there are many—does not have to buy as large a percentage of his year's crush as does the larger processor. The smaller operator who crushes, say from 30,000 to 50,000 bushels of beans per month, can more easily buy his requirements month-to-month than can the processor whose requirements may be in excess of 800,000 bushels per month.



—Photo by Bloomington, Ill., Pantagraph

McMillen shows by graph how soybeans move out of farmers' hands very rapidly in the fall. On the other hand, consumption by oil mills is fairly stable throughout the year. This creates a problem of storage and also increases the risks due to price fluctuations. Holding the graph is R. G. Houghlin, president of the National Soybean Processors Association.

The larger processor in this case is going to need 5 percent plus of the total available-to-be-crushed crop of beans. He is going to have to reach out far and wide to obtain his requirements in order to insure himself a reasonably steady run throughout the year.

This does not mean that the smaller operator does not have his problems. Indeed he does, but they are not the same kind of problems as those of the larger processor.

First of all, he must have a reasonably steady run throughout the year to assure himself of a chance for a profitable operation. He must, if his capacity is 10 million bushels per year, crush as near to 10 million bushels as is possible. To run 70 or 75 percent of this capacity would, in a normal year, assure him of a nice operating loss. This is so because the costs which he can eliminate when he is not operating are but a small percentage of his total cost of doing business.

In general, he can eliminate his steam costs; power costs; his solvent loss (if he is a solvent processor); his maintenance costs; and probably most of his labor costs. His depreciation, insurance, buying and selling organization, his supervision, general overhead, and all the other costs which are the big bulk of his costs of doing business are going to continue when he shuts his plant down for some reason or other. As a result of this condition, this large processor is going to attempt to buy throughout the year as close to 10 million bushels of beans as he can and to sell the approximately 250,000 tons of meal and 1,500 tank cars of oil which he will make from them.

Second, how is he going to buy these 10 million bushels of beans? Steadily throughout the year—800,000 bushels per month? You will probably agree that this would not be a practical idea. According to this chart, 87 percent of the beans sold by the farmers throughout the entire crop year of 1946-1947 were

● *The author describes the problems created for the processor by the fact that producers market the bulk of the crop at one time while the processors need to operate throughout the year. Talk was given at the processor conference at Urbana, Ill.*

sold during September, October, November, and December. By the same token, only 30 percent of the beans crushed by the industry that year were crushed during the first one-third of the year, from September through December.

This chart started with September and goes through August. We normally consider a crop year of soybeans beginning in October and extending through September. It would be more accurate to consider, for the purposes of this discussion that we are talking of the crop year beginning in October and ending in September. This chart naturally is not exactly representative of the average crop year. However, it is a very safe statement to make that more than 50 percent of the average crop of soybeans moves to market each year from October 1 to January 1. This processor, of whom we are talking, will probably buy 7 million bushels of beans, or 70 percent of his year's requirements by the first of January, and he will probably buy between 5 and 6 million of that 7 million bushels prior to December 1 in the normal year.

Suppose he has bought 5½ million bushels by December 1. This means that he has crushed 1,667,000 bushels of beans during October and November: made, sold, and delivered the equivalent in oil and meal, and has on hand, or purchased to be delivered to him, an additional 3,933,000 bushels of beans. This quantity is enough beans to run his plants at full capacity from December 1 to April 26.

No processor is going to be caught in the position of owning 40 percent of his year's requirements which this amount of beans would represent unless those purchases were in some way hedged. To carry on a speculative operation, it is not necessary to have hundreds of thousands of dollars, or millions of dollars invested in brick, mortar, and machinery. All that is needed is a desk and a telephone, and in most cases the cash which would have been invested in plant and equipment.

There are many ways in which this processor, or any processor, can keep himself in a hedged position. It is important to realize, however, that any kind of a hedge carries with it a certain amount of risk, some types of hedges being more risky than others. Just to be hedged does not in itself guarantee that any particular market operation is insured against loss. It does, for the most part however, insure a particular operation against a "catastrophe" loss.

What are some of the ways that this processor can purchase 55 percent of his year's requirements in the first two months of operation and keep himself in a so-called hedged position?

1.—He can do so by the forward sale of his products—in this case, SBOM and soybean oil to users, as he buys his beans.

2.—He can do so by the sale of soybean futures options as he buys his cash beans.

3.—He can do so by the sale of one of his products to consumers, and the sale of his other product in some other futures market. For example, he could sell his soybean oil for future delivery to refiners and users; and sell his meal in the soybean meal futures market in Memphis. Or he could sell his meal as cash meal for future delivery, also to users, and hedge his oil in the cottonseed oil futures market or in the lard futures market. There are any number of hedging possibilities, whether they border on the theoretical or not.

By far the most widely used hedging operation by the soybean industry is the forward sale of cash soybean oil meal and soybean oil. While we know that there are many markets used for the purposes of hedging both oil and meal, the industry as a whole uses the forward sales of its end products as its main method of hedging.

As was stated earlier, there are risks involved with any kind of a hedging operation. The risk connected with the forward sales of the end products (meal and oil) to consumers of these products is the financial ability of the buyer to accept delivery of these products, in the case of a serious market decline. Remember that we are talking about selling oil and meal to users for delivery as far as 12 months in the future. Prices can, and do, fluctuate tremendously over a 12 months' period, particularly at present price levels. If a processor sells to users who are not financially strong, he very definitely runs the risk of the user's not being financially able—even though 100 percent honest—to fulfill his end of the contract.

If meal has dropped $20 per ton, or oil from 5c to 10c per pound from the time of the sale to the time of delivery, this risk can be, and has been, quite real. Remember that we

Buckeye Firm's Newest Mill

You see the Buckeye Cotton Oil Co.'s newest mill near New Madrid, Mo., in operation over a year. It employs the solvent extraction process. The partially-completed plant was bought in 1947 and completed in the spring of 1948 to meet the needs of an expanding region. Like other Buckeye mills, New Madrid's capacity for storing the soybean harvest enables farmers to move their crop and also permits better scheduling of mill operations. The plant is served by the Cotton Belt Railroad.

saw the price of soybean oil drop 20c per pound during a 6 month's period just 2 years ago. We have seen a price drop of over 6c a pound within the last 4 months. SBOM has had similar drastic price drops during the past 2½ years, and we are still on a relatively high price level.

The amount of oil or meal this processor sells to one customer is not the whole story. There are buyers from whose statement you determine, deserve only a small amount of credit, so you set up your credit line to sell him only so many dollars worth of meal or oil. That's fine as far as that goes—only you never know how many tons of meal or tank cars of oil this same customer might have purchased from four other sources. While your credit seems good on the surface, this customer might easily have overextended himself with other purchases.

Hedging Risks

There are certain risks involved also in the hedging operations in connection with the use of future options such as the grain options on the Chicago Board of Trade; the SBOM futures options in Memphis; the cottonseed oil futures market in New York; or the lard futures market in Chicago. A factor to be considered other than the risks involved in this kind of option is the financial aspect of such a hedge. If cash purchases of beans are hedged by selling a like amount of soybean futures in one of the options, it is necessary to deposit 20c per bushel margin. If the purchase or sale of soybeans in the futures market is a speculative sale and not a hedge, the margin is 35c per bushel. The margin requirements on a cottonseed oil futures contract is $500 for a 60,000 lb. contract, or almost 1c a pound; and $900 for a 40,000 lb. contract in lard, or 2¼c per pound.

These risks in hedging cash purchases of beans in the soybean futures market are varied. Let us assume that this processor, in his accumulation of 5½ million bushels up to December 1, was not able to sell the oil and meal from 2 million bushels of these beans or was not satisfied with the spread between the cost of beans and the amount received from the sale of his oil and meal, so he decided to hedge these 2 million bushels of beans in one of the soybean futures options. He sold these 2 million bushels of beans in one of the nearby option months, expecting to buy these options back when he could sell his oil and meal at a more reasonable margin. For one of many reasons, there develops a squeeze in that particular option month, and the price relationship between the value of oil and meal and the option price for beans gets even more out-of-line. He is not in a position to deliver these 2 million bushels of beans, so he has to pay a premium for these options. This is one real risk; and a squeeze, whether slight or serious, occurs often in the futures options, particularly in those options not heavily traded.

Another danger in hedging in the options is the ever-changing basis, or spread, between the option price and the price of cash beans at central Illinois rate points. The "normal" spread is the approximate freight rate from central Illinois to Chicago, roughly 11½c per bushel. In other words, a nearby option should be at least 11½c per bushel more than the cash price for beans in central Illinois country points. Unfortunately, this spread is never constant. It varies constantly from a range where the option may be as high as 15c to 20c over the country price to a point of being a cent or more under the country price. You can see from this, the difficulty in covering and uncovering a hedge in this kind of a market.

There are innumerable kinds of hedges used occasionally by many of the processors. Occasionally soybean oil will be hedged by the sale of some like commodity—cottonseed oil and lard. Occasionally meal will be hedged by the sale of SBOM futures, cottonseed meal futures, and sometimes by the sale of commodities seemingly unrelated to meal, such as corn. Just what the reasoning is behind some of these cross-hedges is somewhat beyond my comprehension, but it has been done.

Nothing Sure-Fire

To sum up the hedging operation of a soybean processor, let me say that in our opinion, there is no "sure fire hedge." They all have risks; some greater than others.

I would like to discuss the often-published report that the spread between the price the farmer gets for his beans and the price the processor gets for his oil and meal is some astronomical figure which goes to prove that the processor is not paying as much as he could for his soybeans.

I believe that it is perfectly safe to say that a larger processor (the 10 million bushel processor of whom we are talking) does not buy a bushel of beans direct from the farmer. He has to depend upon the country elevator man, the broker, and the terminal elevator for the accumulation of his soybeans. He could not buy enough beans direct from the farmer to do him much good, and the amount he did buy would probably upset his other sources of supply.

You all realize and know that there are a number of real costs

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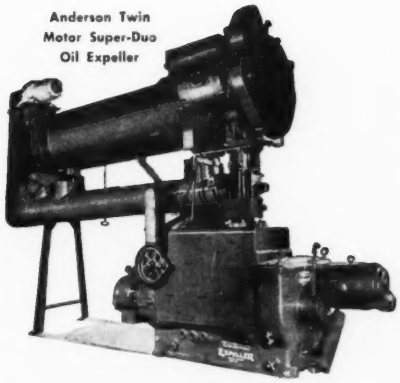
Wise old King Solomon would have a hard time deciding what raw materials to press today. Market conditions and prices are too uncertain for anyone to foresee the future. But one thing is sure. If Solomon were an oil mill operator, he would prepare himself for *any contingency* . . . he would own Expellers* which would enable him to press *any material* . . . from soybeans to flaxseed . . . peanuts to cottonseed . . . to mention only a few. The exclusive multi-pressing feature of Expellers would enable Solomon to extricate himself from unfavorable market conditions. If it becomes unwise to continue pressing a certain raw material, his Expeller could be changed to press some other seeds or nuts where conditions are better. Learn how multi-pressing and Expellers can help you. Write us today . . . we will be glad to have an Anderson Engineer give you Expeller facts and figures.



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ANDERSON EXPELLERS AND SOLVENT EXTRACTION EQUIPMENT

between the price the farmer gets for his soybeans and the price the processor pays for those same beans.

The most important point is, however, that one cannot compare today's price of beans and today's price of oil and meal and say that this is the margin the processor makes. When the larger processor buys beans today, he has to sell, for the most part, oil and meal for future delivery which, during these high price levels, is heavily discounted to nearby prices.

We have been talking about the processor who had accumulated 5½ million bushels of beans as of December 1. This amount of beans will run his plants until April 26 so that during October and November, he has had to sell his products at least that far ahead. The probability is, that he sold much of his meal and oil from these 5½ million bushels of beans through September at a substantial discount under the nearby market for oil and meal. This processor had to buy this amount of beans and sell his soybean oil and meal at a substantial discount in order to insure himself a capacity operation. This is the normal type operation of this processor, so except to a small degree, he cannot avail himself of the premium prices for nearby products. This impression of such wide margins has gained much publicity in the past several years, and has not been based on actual operating conditions.

Last fall during the harvesting period of October, November, and December, meal sold for future delivery at a discount of $4 to $6 per ton. At one time in November, December meal was selling for $69 per ton, and on the same day April/September meal was selling for $59 per ton. Soybean oil for future delivery was selling at a discount of 1½c to 2½c per pound compared to nearby shipment oil. The premium at that time on nearby oil was wider than normal. This was caused by the very heavy demand for nearby oil, and the fact that there was little nearby oil available for sale by the processors. This wider-than-normal spread existed for perhaps 6 to 8 weeks. The same was true in respect to meal. This was caused, at least in part, by the high price level at which meal was selling. When a buyer thinks of buying forward products at these price levels, he is naturally going to discount the price for future delivery because of the potential risk he is taking. When he buys meal for $30 per ton, he can lose only $30. When it sells for $65 or $70 per ton, he can lose $65 or $70. He is very naturally going to discount future commitments more at the $65 level than at the $30 level.

This problem of selling future products at a discount is one which probably has not been sufficiently well realized by many in talking about the abnormal spreads realized by the soybean industry. There isn't one in the industry who doesn't wish for the condition in which he could buy his supplies throughout the year as he needed them. It would not then be necessary to carry such tremendously large inventories, or to borrow so heavily to carry these inventories. His hedging problems would be minimized, and perhaps the fluctuation in prices of beans, meal, and oil would be less rapid and severe.

This condition, of course, cannot exist until there is a sufficiently large crop of beans in comparison to the crushing capacity of the industry to result in the carry-over from one crop year to the next of a substantial portion of the crop, which condition we see with respect to other small grains.

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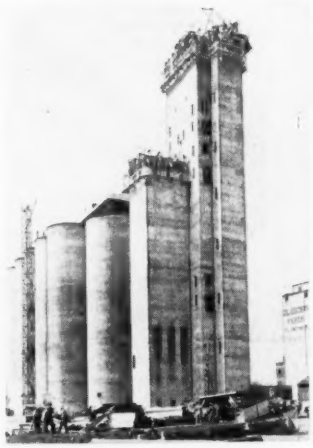
GLIDDEN ELEVATOR



Nearing its final height of 195 feet is the grain elevator at the Glidden Co.'s new 3 million-dollar soybean extraction plant in Indianapolis. Located next to Glidden's feed mill division, the storage bins will have a capacity of 1½ million bushels of soybeans. In the foreground, foundations are being laid for two 4½-story brick buildings which will house the soybean oil extraction unit. The new plant is expected to be in production by September and will be operated in conjunction with the feed mill.

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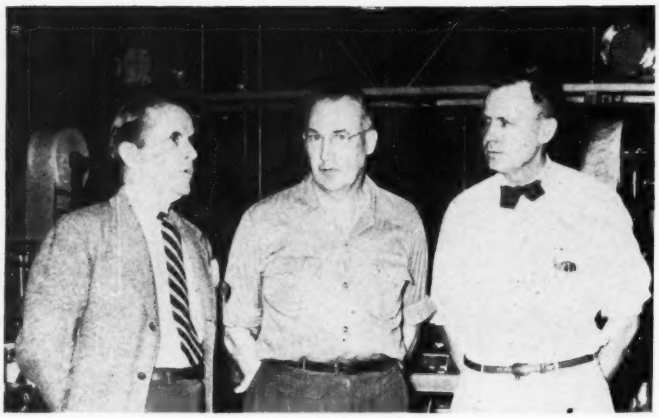

Three of the men responsible for the successful operation of the new margarine plant at Osceola Foods, Inc., are shown here in a conference in the production room of the new plant. They are, left to right, L. C. B. Young, president and general manager of the plant; H. W. Bevarly, engineer of the votator division of the Girdler Corp., Louisville, Ky., and L. F. Conway, production manager.

MARGARINE PLANT AT OSCEOLA, ARK.

The new margarine plant of Osceola Foods, Inc., Osceola, Ark., which has announced its formal opening, is the outgrowth of the college dream of L. C. B. Young, president and general manager.

Young conceived the idea of processing in the South the materials grown in the South, while he was a law student at Vanderbilt University.

At Vanderbilt Young used to meet with a group of professors and students known as the Agrarian group. Their discussions led to economic conditions in the South, and the idea grew that the economic salvation of the section lay in processing the products of her rich fields from producer to ultimate consumer.

Step by step Young began to see his dream come true. First there was the Processors Cooperative Gin to start Mississippi County humming with one of the great textile mills of the nation. Next came Osceola Products Co., Home Oil Co., and then Osceola Alfalfa Milling Co.

When the Osceola Products Co. was started, Young arranged for purchase of the land across the road. He envisioned the day when there would be a plant built there to use the soybean and cottonseed oil produced by the mill. Osceola Foods, Inc., is a realization of that vision.

Young now dreams of an oil refinery to process the oil produced by the mill. At present the oil is sold and refined oil is purchased for use in the margarine plant. In case of a shortage of oil as occurred during the recent war. Young points out that a refinery would assure the new plant of a supply of raw materials and continued operation.

This new margarine plant is modern in every respect from its concrete steel foundation to its shining machinery.

The building is of concrete, steel and brick and is designed along the latest lines. Floors are of acid-proof tile and walls are of ceramic tile. Ceilings are of concrete so that the entire plant can be scalded or steam-cleaned.

In the processing room, conceded to be one of the best in the world, there are no windows. Air enters through a Westinghouse Precipitron, which filters out minute particles of dust and smoke. Constant temperature is maintained and all equipment is acid proof and easily cleaned.

The new plant has a maximum capacity of 3 million pounds of margarine a month on a 24-hour basis.

As originally designed the plant would produce margarine and shortening and include an oil refinery.

The board of directors consist of: Young, president; D. S. Laney, vice president; R. C. Bryan, treasurer; W. M. Taylor of Keiser and W. B. Wright of Kennett, Mo.

Key personnel include: L. F. Conway, production manager; Ed O. Kirby, secretary and office manager; J. C. James, sales manager; Bart Mangini, vice president in charge of distribution; R. A. Atkinson, plant superintendent; and Chester Walker, maintenance foreman.

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World peanut production in 1948 is estimated at a record figure of 11,065,000 short tons of unshelled nuts, according to the latest information available in the Office of Foreign Agricultural Relations. This represents an increase of 3 percent over the 1947 crop of 10,750,000 tons and 16 percent over the pre-war average of 9,550,000.

ALLIED MILLS TO PRODUCE GELSOY

"Gelsoy," the U. S. Department of Agriculture's new soy-protein product, will soon be in commercial production by Allied Mills at Peoria, Ill., the USDA has announced. The company is building a new plant to make it.

The substance, said to be the first vegetable protein product found which jells, can be whipped like egg white to make meringues for pies, the USDA has reported. It is also useful as a water-resistant adhesive, since it becomes insoluble when heated. Since it will stick to tin and glass as well as to wood, paper, and other materials, USDA researchers predicted that its first industrial use probably will be to seal the cork into metal crown caps for bottles.

USDA scientists also anticipated that "Gelsoy" will find a place in making marshmallows, candy, puddings, ice creams, cookie and cake fillings, prepared cold meats, soups, and other products.

One of the prospects opened up by the heat-sealing, water-resistant feature, is a use as a remoistening adhesive to seal envelopes. Such envelopes could not be opened by steaming them, since the heat of the steam would make the glue waterproof, the USDA pointed out.

"Gelsoy" is made without heating, from soybean flakes, by a process of alcohol washing and water extraction. The result, the Department said, is a fine white powder, said to lack the beany or bitter taste of some soybean products made by other methods. The powder is mixed with water for whipping or jelling purposes in foods, or for use as glue.

Credit for the discovery of the "Gelsoy" has been awarded to Mrs. Letta I. DeVoss, a laboratory assistant at the USDA's Northern Regional Research Laboratory at Peoria. Mrs. DeVoss discovered the gel properties of the new product when a batch she was supervising was overcooked. She was awarded the USDA's superior service award by Secretary of Agriculture Charles F. Brannan.

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Please mention the *Soybean Digest* when writing to our advertisers.

YELLOW BAN REPEALED IN CALIFORNIA

A bill repealing California's prohibition against manufacture and sale of yellow margarine was signed by Gov. Earl Warren June 28, giving consumer forces their ninth major state victory in the last 2 years.

California thus became the fourth state to repeal drastic anti-margarine laws this year. Michigan and New Hampshire abolished their prohibitions against yellow margarine and Tennessee outlawed its 10-cent per pound state tax on the colored product. (New Hampshire bill abolishing the yellow ban was approved by the governor June 1.)

In 1948, five states—Maine, Maryland, Massachusetts, Missouri and New Jersey—abolished their prohibitions against yellow margarine.

When the California law becomes effective, the list of states prohibiting yellow margarine will be narrowed to 16. In Ohio, a referendum on repeal of the state anti-margarine laws is scheduled for this fall.

Additionally, in 1949, five states have modified their anti-margarine laws, these being Washington (repeal of 15-cent state tax on white margarine); Idaho (reduction of retailers and wholesalers license fees); North Carolina (repeal of ban on yellow margarine in restaurants); Wyoming (repeal of 10-cent per pound state tax on vegetable margarine), and Connecticut (repeal of retailers, wholesalers and manufacturers' license fees).

NEW TUNE HIT?

A new tune "Oleo Oh!" hit the air waves in June and has been carried by at least one of the country's leading radio stations.

The song is a strong and unblushing plug for margarine. There seemed to be a good chance that it might become one of the smash hits of 1949. Recording is by Freddie Fisher's Band, and it is published by King Record Co., one of the largest in the business.

You may be hearing "Oleo Oh!" over your local radio station. If not, disc jokeys will probably play it for you if you phone in and request it.

KALTON

(Continued from page 19)

this time. Certainly, the results would indicate that considerable improvement may be made in this regard, despite climatic limitations. There are still other factors yet to be investigated which may influence yield potentialities. Control of insects through dusting is one. Rate and method (row, drilled or broadcast) of planting is another. It is well known that soybeans are quite drought resistant in the vegetative stages. Consequently, in years when late summer and fall rains occur, improved, late-planted varieties might be left in the field until maturity for grain production. When the summer and fall continue dry, the crop could be cut for hay or plowed under for green manure in time to plant winter grains. The soybean has served in this capacity for many years in other regions. With due consideration, its merits as an oilseed crop and as a legume still make it worthy of continued research at the Texas Research Foundation.

—sbd—

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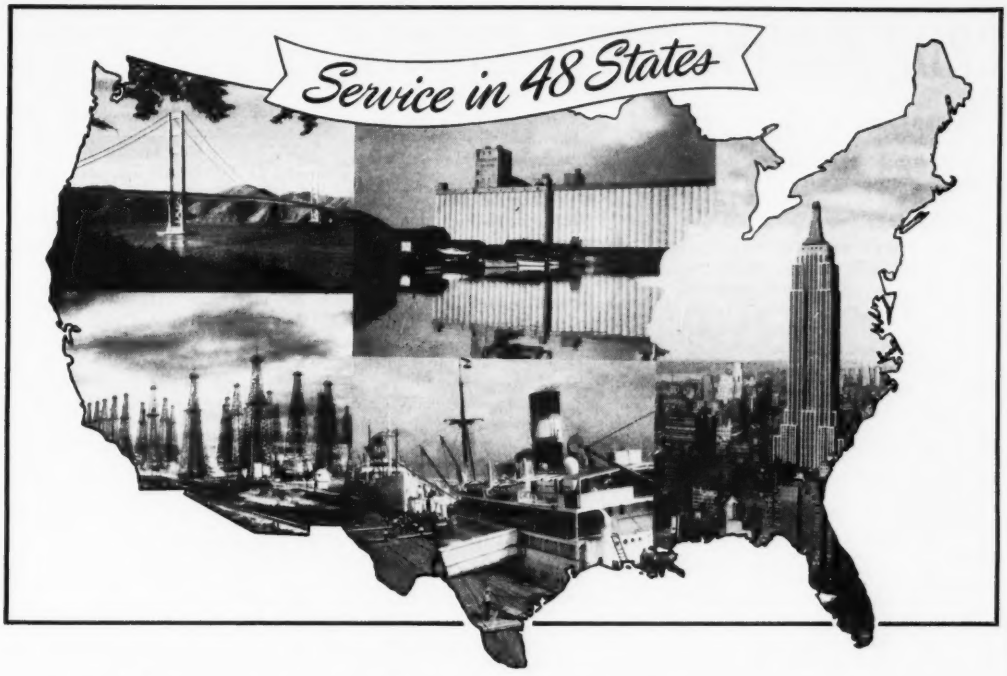

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CROP MAKING RAPID GROWTH

Condition of the soybean crop was good with chances of maturity greater than is usual for July 1 in most heavy soybean producing areas, according to Soybean Digest crop reporters.

Moisture was ample to excess in most areas, with a few spots reported as dry. The weed problem is not great in most places. Little grasshopper or other pest damage thus far is reported, although a heavy grasshopper infestation is expected in some spots.

Most Digest reporters continue to forecast some shrink in acreage. There has been some replacement of corn, cotton and other crop acreage by soybeans due to unfavorable conditions for these crops, though this has been small compared to some years.

Reports of Soybean Digest correspondents follow:

ARKANSAS

Jacob Hartz, Jr., Jacob Hartz Seed Co., Inc., Stuttgart, for south central, southeast (June 23): Planting 2 weeks late. Soybean acreage 20% less than 1948, 25% less than earlier estimates due to increased cotton and rice. Some large growers have planted no more than enough beans to obtain seed for 1950. Price ratio of cotton and rice more favorable. 10% of acreage to hay, 90% for beans. Weather wet. Crop condition grassy due to excessive moisture.

Paul C. Hughes, field service director, American Soybean Association, for northeast Arkansas, southeast Missouri and west Tennessee (June 28): Planting date normal. A few S-100s still being planted in fields where wheat has been harvested, and a few fields of cotton have been plowed up and planted in soybeans, but not enough to make much change in acreage. Acreage 15-30% less than 1948, and some less than earlier intended due to fine weather at planting time for cotton. Too much rain causing many fields not to be cultivated enough so are very grassy.

FLORIDA

E. N. Stephens, county agent, Pensacola, Fla., for Escambia County (June 25): Planting date normal. Acreage same as 1948. 98% for beans. Condition of crop excellent.

ILLINOIS

Walter W. McLaughlin, farm service department, Citizens National Bank of Decatur, for Decatur (June 23): Planting date normal. Acreage 90% of 1948, 95% for beans. No appreciable grasshopper damage yet but many young hoppers. Weather conditions and current moisture supply okay most of area. Condition of crop 110% of normal, maturity 100%. Beans off to fine start. Most cultivated once.

Russell S. Davis, Clayton, for west central (June 24): Most of crop seeded a bit earlier than common. Only fields intentionally delayed account of weedy conditions seeded in June. Almost ideal conditions both weather and soil for making seedbeds and getting crop started. Stands good. Grasshopper hatch either very late or a failure as only a few small hoppers can be found in fencerows.

E. Eversole, Hindsboro, for Douglas, Coles and Edgar counties (June 24): Planting about 10 days early compared with normal. Acreage 15-20% less than 1947. Weather ideal. Plenty of moisture. Fields free from weeds. Beans and corn both look better than 1948. Should harvest both crops about 2 weeks earlier than average. Beans 6 to 8 in. in height. If a good start means anything we are certainly ahead this year. Local elevator bidding $1.83 for new beans. Storage for beans and corn a real problem. Very few farmers contracting beans for November delivery.

Gilbert F. Smith, Mahomet, for east central (June 24): Planting date normal with plenty of moisture. Acreage 15-20% less than 1948. As I travel from Champaign to Springfield crop is normal. Beans all look like will mature in good time.

J. E. Johnson, Champaign, for Champaign and adjoining counties (June 26): Planting date 10 days-2 weeks earlier than normal. Acreage 15% or more less than 1948 in 10 large growing counties this section. Lower yields of last few years, price situation for past 3 or 4 years most discouraging. Price return as compared with corn a factor with many. Not over 3% for hay. Grow-

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ers starting earlier to combat hoppers. Expect some damage, not serious. Growing conditions ideal, temperatures warm, no rains for week resulting in cultivation of fields with dry conditions very favorable for heavy weed kill. Crop 20% further advanced in growth, color and stand than normal.

Frank S. Garwood & Sons, Stonington, for south central (June 27): Planting date 5-7 days earlier than normal. Acreage 25% less than 1948. Present weather conditions good with moisture limited in some areas. Condition of crop 10% above normal. Chances of maturity very good. 80% of crop now being rowed, rows varying from 21 to 40 in.

W. L. Burlison, University of Illinois, Urbana, for Central (June 27): Planting date earlier than usual. Present weather conditions and moisture supply splendid. Condition of crop better than normal. Chances of maturity A1. All crops tops here.

INDIANA

Peter J. Lux, State PMA Indianapolis: Planting date earlier than normal. Acreage about same as 1948. Too much moisture. Condition of crop good. Chances for maturity fine.

Ersel Walley, Walley Agricultural Service, Fort Wayne 2, for northeast Indiana and Northwest Ohio (June 24): 80% crop planted on normal date; 20% very late. Acreage 10% less than 1948. Some planted to replace drowned out corn. Weather conditions spotted. Too much rain some localities. Crop condition 90% normal. 80% okay as to maturity. 20% doubtful. Total production likely 15-20% less than '48.

J. B. Edmondson, Danville, for south central (June 24): Planting date about 10 days ahead of last 2 years. Acreage about 5-6% down compared with 1948. Somewhat more acreage than earlier intentions. Clover failures partly responsible. Hay needs turned to soybeans. Probably 6% planted for hay. Young grasshoppers much in evidence. Moisture supply plentiful with good stand all over territory. Weeds bothering early plantings but not general. Condition of crop around 100% or above. Inoculation good.

IOWA

Otis J. Luttschwager, Des Moines (June 27): Planting date 2 weeks earlier than normal. Acreage 90% of 1948. Weather conditions and moisture supply excellent with chances of maturity excellent.

R. S. Overton, Knoxville, for south central (June 22): Acreage 10% less than 1948. 10% for hay. Weather conditions and moisture supply good. Condition of crop 100% of normal with chances of maturity good.

O. N. LaFollette, Iowa Department of Agriculture, Des Moines (June 22): Soybean acreage down in grain area, up in legume hay shortage area. Grasshopper damage beginning to show. Weather conditions and moisture supply good.

Fred Hawthorn, Castana, for western (June 27): Planting date normal. Acreage 30% less than 1948. Weather favorable. Chances of maturity good. A few fields put in late to replace corn taken by cutworms.

Martin G. Weiss, farm crops subsection, Ames (June 27): Planting date 3-4 days earlier than normal. Acreage 13% less than 1948, 4% less than earlier intentions. 10% intended for hay. Many small grasshoppers in various sections. Present weather conditions and moisture supply excellent. Condition of crop normal. Chances of maturity good except a few acres planted late following cutworm damage to corn. Some spotty germination caused by soybeans following meadow and soil

too dry, and soybeans planted too deep and resulting rains cemented them in.

KENTUCKY

H. F. Bryant, agricultural statistician for Kentucky, Bureau of Agricultural Economics, Louisville (June 23): Planting date possibly a bit earlier than normal on upland, delayed on bottoms where bulk of acreage is. Some army worms but not bad. Worst infestations not in major soy areas. Some flat land too wet, but conditions as whole favorable. Condition of crop normal or a bit ahead of normal. Chances of maturity 100% so far.

A. I. Reisz, Ohio Valley Soybean Co-op, Henderson, for western Kentucky and southern Indiana (June 23): Planting date 15 days earlier than normal. Acreage 15% less than 1948. Weather conditions and moisture supply good. Condition of crop earlier than normal. Chances of maturity good.

MICHIGAN

J. H. Quick, Newport, for southeast (June 23): Planting date normal. Acreage 5% less than 1948. Weather and moisture ideal. Crop condition 10% above normal. Perfect stand. Chances for maturity okay.

MINNESOTA

R. E. Hodgson, Waseca, for southeast (June 23): Planting date about normal. Acreage about same as earlier intentions. Never saw beans look better. Chances of maturity excellent. A trip last week across northwest edge of Iowa and southwest border of Minnesota showed soybeans everywhere doing extremely well. Stands generally excellent, beans clean and looked unusually good. Averaged about 8 in. high June 19. Seems to be big reduction in number of fields, but fields are larger, indicating transition from emergency "fill in" crop to regular place in rotation. Practically all grown in rows and cultivated. Rows 24 in. where tillage machinery available.

John W. Evans, Montevideo, for southwest central (June 25): Planting date earlier than average. Acreage 85% of 1948. Corn and flax stole the show. Moisture abundant. Crop ahead of normal for growth. Rains interfering with cultivation. Weeds thriving but condition not serious.

MISSOURI

A. F. Stephens, general agricultural agent, Gulf, Mobile & Ohio Railroad, St. Louis, for northeast Missouri and central Illinois (June 23): Planting date northeast Missouri 10-16 days late; central Illinois normal to early. Northeast Missouri acreage 115% of 1948, central Illinois 90%. Missouri increase due to decreased oats. Too much moisture northeast Missouri; Illinois okay. Chances of maturity in northeast Missouri 80%; Illinois 100%.

J. Ross Fleetwood, College of Agriculture, Columbia (June 23): Planting date about normal. Some beans yet to be planted. Acreage 2% less than 1948. Acreage may be greater than earlier intentions because of abandonment of cotton and corn, replaced with late soys. Some army worm damage. Too wet in most areas. Condition of crop very good except for weeds and grass.

E. M. Poirot, Golden City, for southwest (June 24): Planting date later than normal. Acreage larger than earlier intentions due to delay in corn planting. Ample moisture. Fair warm weather now. Early planting injured due to wet weather and grass. Chances of maturity good.

NEBRASKA

Fremont Cake & Meal Co., Fremont, for eastern (June 22): Planting date about normal. Acreage about 10% greater than 1948, and

somewhat higher than earlier intentions due to replacing winter killed wheat with beans. Weather is warm and moisture ample. Condition of crop good.

NORTH DAKOTA

C. J. Heltemes, Fargo (June 27): Planting date about normal. 15-20% of acreage for hay. Present weather conditions and current moisture supply good in area where most of acreage located. Condition of crop average. Chance of maturity good.

NEW JERSEY

John E. Baylor, assistant extension specialist in farm crops, College of Agriculture, Rutgers University, New Brunswick (June 24): 14% of crop planted for grain, 36% for hay. Planting date normal. Extremely dry, soybeans suffering especially in southern half of state. Condition of crop near normal but if drought continues crop will be severely reduced. Chances of maturity okay.

OHIO

David G. Wing, Mechanicsburg, for west central (June 23): Two extremes in planting, one in April and one in June. Acreage 10% less than 1948. Good corn planting weather favored more corn planting. Hard rains second week in June germinated all late beans and most look good. Early beans high enough to cover ground and in places knee high. All should mature okay.

G. C. McIlroy, Irwin, for west central (June 23): Planting date little earlier than normal. Acreage 12% less than 1948. Moisture supply adequate as beans are getting first cultivation. Condition of crop average or slightly below. Some stands not as good as usual.

PENNSYLVANIA

E. L. Gasteiger, agricultural statistician, P. O. Box 248, Harrisburg (June 24): Planting date normal. Less acreage than 1948. One-half for hay. Topsoil very dry and subsoil moisture fair. Condition of crop fair, too dry. Chances of maturity good if rain soon.

ONTARIO

R. H. Peck, River Canard, Ontario, Canada, for southwestern Ontario (June 24): Planting date about normal. Acreage 120% of 1948. Weather very favorable at present, although earlier very dry weather caused uneven germination. Soaking rain June 16-17 very badly needed. Possibly a little more growth than usual. Excellent weed control to date.

—s b d—

CONVENTION TOUR

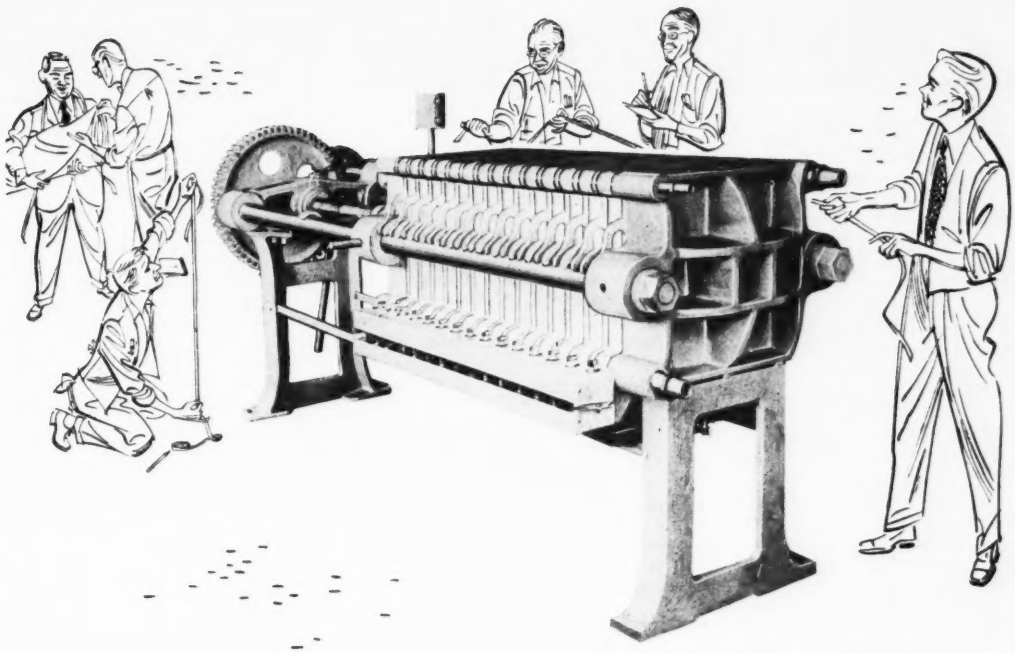
(*Continued from page 17*)

most popular stops during the Experimental Station tour, will be at the soybean disease garden. This disease garden was established in 1942. Soybeans have been grown on the plot each year since that time. The promising strains from the division of agronomy and plant genetics are planted in this spot each year in order to observe their reaction to disease. This year 45 such promising selections of high agronomic value are planted in the disease garden for observation on susceptibility or resistance to soybean diseases in this area.

For those interested in visiting enroute, the Minnesota branch experiment stations, soybean yield trials are being conducted at Waseca, Morris, Crookston, and Grand Rapids. A University-sponsored yield trial is located at Cobden also.

Several soybean experiments are carried out at the University's new research center near Rosemount about 25 miles south and east of St. Paul. Several yield trials as well as a study on the influence of crop rotation on soybean root rot and seedling blight caused by *Rhizoctonia solani* are located at Rosemount.

This latter test is a 6-year rotation including peas, flax, soybeans, corn, oats, and red clover in that order. The experiment is planned on the basis of 1/40 acre plots replicated three times.



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SOY FLOUR BREAD

A superior bread containing 8 percent nonfat dry milk solids and 6 percent soy flour has been developed for use in New York state institutions by the state's department of mental hygiene.

The bread has a fine golden brown, tender crust and excellent texture and grain. The inside color is slightly creamy and it has a rich savory flavor. The new bread is generally agreed to be superior to that previously served at the state institutions, and has received general approval.

DEVELOPMENT OF HIGH QUALITY FOODS, by John A. Fields, field service advisor, New York State Department of Mental Hygiene, Albany. Journal of the American Dietetic Association, Chicago, Ill., May, 1949.

See also the article by Dr. Clive McCay, "Soy Makes Bread Worth Eating," in this issue.

Chemicals in Bread

Reports of toxic effects of wheat flour treated with nitrogen trichloride when fed to dogs, cats and other animals have led to the prohibition of the use of this chemical in bread.

Tests have been made of wheat flour treated with chlorine dioxide instead of nitrogen trichloride. Dogs, rabbits, monkeys and rats have all been fed rations containing flour so treated over long periods of time with no ill effects. Human beings were also fed diets containing large amounts of wheat flour and gluten treated with high levels of chlorine dioxide for 6-week periods without harm that could be detected.

FEEDING TESTS WITH CHLORINE-DIOXIDE TREATED FLOUR. By G. W. Newell, S. N. Gerschoff, H. M. Suckle, W. E. Gilson, T. C. Erickson and C. A. Elvehjem, University of Wisconsin. Cereal Chemistry, Lincoln, Nebr., Mar., 1949.

Chick Factor

Experiments at the Bureau of Animal Industry station at Beltsville, Md., have confirmed the fact that commercial soybean oil meal, cottonseed meal and peanut meal are deficient in a dietary factor essential for growth of chickens. The factor is present in cow manure and fish meal.

Corn gluten meal is probably also deficient in this factor, but the experiments with this feedstuff were complicated by other deficiencies.

On the basis of experiments with soybean oil meal the same factor is believed to be required for hatchability and viability of progeny.

When supplemented by this factor, diets composed largely of soybean oil meal and grains, with no animal protein, were satisfactory for growing chicks and breeding stock.

RELATION OF AN UNIDENTIFIED DIETARY FACTOR TO THE UTILIZATION OF VEGETABLE PROTEINS BY CHICKENS. By H. R. Bird, Max Rubin and A. C. Groschke, Bureau of Animal Industry, Beltsville, Md. World's Poultry Congress Official Report, 1948.

Methionine, Cystine

The importance of methionine and cystine in rations for growing chicks has been investigated extensively, but the need for these amino acids by growing turkey poults had not been reported on.

Now workers at the University of California, Davis have employed an isolated protein as the principal source of amino acids to devise a basal ration in which the normal growth of poults was limited by methionine and cystine deficiencies. By varying the cystine and methionine additions to the basal ration it was possible to determine the amounts of these amino acids required for optimum growth.

Approximately .5 percent methionine and .3 percent cystine were required for the optimum growth of the poults in a ration containing 24 percent crude protein. Methionine may completely replace cystine in the ration but cystine is not changed to methionine.

THE SULFUR AMINO ACID REQUIREMENTS OF TURKEY POULTS. By F. H. Kratzer, D. E. Williams and Blanche Marshall. Journal of Nutrition, Mar. 10, 1949. Published by Wistar Institute of Anatomy and Biology, Philadelphia, Pa.

More About APF

Further information on APF—the animal protein factor that apparently may make it possible to eliminate animal proteins entirely from the hog's diet—is offered by Damon Catron and C. C. Culbertson of Iowa State College.

Catron and Culbertson have found that APF will do the following when added to an all-plant protein ration for pigs:

1—It produces from 19 to 24 percent faster gains than the all-plant ration.

2—It finishes pigs for market up to 20 days earlier.

3—APF produced 100 pounds of pork using from 7 to 10 percent less feed in a properly balanced ration.

4—Concentrated APF can replace the same factor found in animal proteins such as condensed fish solubles, fish meal, meat scraps or tankage. These usually contain more complete amino acids and some other nutrients not found in plant proteins, however. For this reason, it is likely that hog-raisers will continue to feed some animal proteins but with APF added.

FASTER GAINS WITH APF. By Damon Catron and C. C. Culbertson. Iowa Farm Science, May, 1949. Iowa State College, Ames, Iowa.

High-Protein Diets

Chick diets consisting of more than 20 percent protein may give faster early growth, but the advantage of the high-protein diet is largely lost by the time the chicks go to market, results of Borden Co. experiments indicate.

Soybean oil meal was used as the chief source of protein in experiments both with chicks and turkey poults.

With several practical poult diets, poults grew best up to 7 or 8 weeks of age on a diet of 28 percent protein. They grew the fastest the first 2 weeks on 32-percent-protein diets. But continuing the poults on protein levels above 28 percent beyond about 2 weeks was undesirable.

In one test a protein level of 36 percent was apparently toxic. Increasing the animal protein factor content of the diet did not improve results in this test. A protein level near 35 percent gave good results when a high-energy, low fibre diet was used.

EXPERIENCES WITH HIGH-PROTEIN DIETS FOR CHICKS AND POULTS. By Malcolm D. Lloyd, Clement A. Reed and James C. Fritz. The Borden Co., Elgin, Ill. Poultry Science, Jan., 1949.

Protein for Cattle

The addition of soybean oil meal to a low protein cattle ration improved the digestibility of both corn cobs and timothy hay, Burroughs and Gerlaugh found out at the Ohio Agricultural Experiment Station.

Just why is not known, but these Ohio men have carried out further trials to obtain information on factors in protein feeds that influence roughage digestion in cattle.

They have concluded that the protein requirement for efficient roughage digestion in cattle is very low when roughages are fed in the absence of starch. When starch forms a part of the ration the need for protein supplement is increased.

FURTHER OBSERVATIONS ON THE EFFECT OF PROTEIN UPON ROUGHAGE DIGESTION IN CATTLE. By W. Burroughs, P. Gerlaugh, B. H. Edgington and R. M. Bethke. Ohio Agricultural Experiment Station. Journal of Animal Science, Feb., 1949.

Vegetable Proteins

Canadians are short of vegetable proteins for poultry feeding. For this reason McGill University, Province of Quebec, has undertaken experiments to check the comparative feeding value of sunflower seed oil meal and horsebean seed meal as well as linseed oil meal. Sunflower and horsebean seed are not so well known in Canada as soybeans but are climatically adapted.

The investigations indicate that

decorticated sunflower seed oil meal is superior to soybean oil meal, though it can still be improved with the addition of a meat meal to the diet.

The horsebean seed meal was found to be deficient in methionine and choline. Chicks responded favorably to the inclusion of fish meal and sunflower seed meal as supplementary sources of protein.

Water treatment of linseed oil meal reduced its toxic effects, permitting it to be used more liberally in chick rations. But it is significantly inferior in feeding value to soybean oil meal.

INVESTIGATIONS UPON VEGETABLE PROTEIN SOURCES FOR POULTRY RATIONS. By N. Nikolaiczuk, G. J. Brisson and K. V. Mani. World's Poultry Congress, Official Report, 1948.

Disease Treatment

Following the increase in Virginia soybean acreage, several new diseases have become prevalent in that state.

Pod and stem blight, *Diaporthe sojae*, and frog-eye leaf spot, *Cercospora daizu* (*C. sojina*) are frequently observed. Sclerotial blight, *Sclerotium rolfsii*, is rather common in the eastern Virginia light sandy soils.

To learn if soybean seed treatment has practical value, Virginia Polytechnic Institute set up several demonstrations with treatment of soybean seed with Arasan. Results were spectacular in some cases.

In one demonstration, treatment of low-vitality seed increased the stand 103 percent. In cases where the seed was of high quality and high germination, treatment resulted in very little increase in stand.

ALFALFA AND SOYBEAN DISEASES IN VIRGINIA, 1948. By S. B. Fenne. Plant Disease Reporter, Feb., 1949.

Miscellaneous

REACTIONS OF *TERT*-BUTYL HYPOCHLORITE WITH VEGEABLE OILS AND DERIVATIVES. SOYBEAN OIL. By H. M. Teeter, R. C. Bachmann, E. W. Bell and J. C. Cowan, Northern Regional Research Laboratory. Industrial and Engineering Chemistry, Washington, D. C., Apr., 1949.

The compound *tert*-butyl hypochlorite has been investigated as a chlorinating agent for soybean oil and methyl esters of soybean fat acids.

SOME CONSIDERATION WITH RESPECT TO SOYBEAN PROTEIN. by N. R. Gotthoffer, research administrator, the Drackett Co. Paper Mill News, New York City, May 7, 1949.

Paper presented before the first annual Coating Conference of TAPPI at Grand Rapids, Mich., on soy protein as a paper coating.

SOME EFFECTS OF DIFFERENT LEVELS OF PROTEIN FEEDING ON DAIRY COW NUTRITION. By C. W. Holdaway, head dairy department, Virginia Polytechnic Institute. Virginia Academy of Science Proceedings, 1947.

Experiments indicate that overfeeding of protein is harmful from the health standpoint; underfeeding is economically unprofitable.

TRANSFER BAUGHMAN

Don Baughman, manager of the commodity purchasing department in the Fort Wayne office of McMillen Feed Mills and Central Soya Co., Inc., has been transferred to the managership of the soybean purchasing department in charge of Ohio and Indiana soybean and grain purchases, it was announced by D. W. McMillen Jr., vice chairman of the board of Central Soya Co., Inc.

Baughman came to the Fort Wayne office from the Gibson City, Ill., plant of the company where he was in charge of soybean and grain purchasing in the Illinois area.

The activities of the commodity purchasing department will be handled by Elmer Korte, purchasing agent and Al Smith, assistant purchasing agent.

Paul Coolman, who has been associated with the soybean and grain purchasing department in Fort Wayne for the past several years, will continue as Mr. Baughman's assistant.

Bob Ogles, who was placed in charge of the Illinois soybean and grain purchasing department in Gibson City, Ill., when Mr. Baughman was transferred to the Fort Wayne office will continue in that capacity in Illinois and will be assisted by Art McCarty. Mrs. Madeline Kinney will continue in charge of bean purchases made through the Chicago office of Central Soya Co., Inc. The activities and functions of all of these departments will continue to be under the direction of W. E. Huge, vice president.

Solvent plant at Emporia of Kansas Soya Products Co.

KANSAS CHANGE TO SOLVENT PROCESS

Kansas Soya Products Co., Emporia, Kans., is a new addition to the list of progressive soybean processors using the solvent method of oil extraction. The Emporia firm's new facilities went into full operation recently, after a year of planning and building.

With the added installations, Kansas Soya has capacity for handling 2 million bushels of soybeans annually at Emporia and 1,500,000 bushels at Kansas City, Kans. The new plant can turn out over 200 tank cars of oil and 37,500 tons of meal each year. The 50 employees provide Emporia with a payroll of over $200,000 annually.

Ted Lord is president of Kansas Soya. His brothers, Dick and Phil, are vice presidents and have worked together with him since the firm's inception in 1941 to its present position of leadership in the area. The company owns an Expeller plant in Kansas City, Kans., also.

The new improvements which increase production in Emporia by 250 percent, involved building of an extraction tower, a preparation building, a steam generation plant and a 120-ton railroad car scale. A 12-foot deep pond was dug to hold a water reserve of 1,250,000 gallons of water for use in cooling condensers. The plant uses 350,000 gallons of water a day.

GRITS and FLAKES... FROM THE WORLD OF SOY

With a view to expanding its Midwest operations, Mente & Co., Inc., New Orleans, has added two new men to its sales force in that area—John R. Roche, formerly with the U. S. Bag Co. of Omaha, and Edward A. Stine, well known in the Kansas City region because of his long association with General Mills there.

* * * *

H. L. Forbis Co., Detroit, has been appointed sales representative for the chemical division of General Mills, Inc. for the state of Michigan. S. S. Skelton Co., Cleveland, will represent the company for northeast Ohio.

* * * *

The Chicago Board of Trade board of directors has elected the following to membership: Franklin G. Clement, Clement Curtis & Co.; Robert J. Mayer, Thomson & McKinnon; Patrick M. Shea, Daniel F. Rice & Co.; Arthur C. Juull, Faroll & Co.; Emil F. Tiedemann, Miller & Hart, Inc.; Ray C. Feuerhaken, Jr., Hollander & Feuerhaken; and William Wood Prince, president of the Union Stock Yards & Transit Co., all of Chicago; Donald K. Phillips, E. F. Hutton & Co., New York City; Gordon G. Brown, Harris, Brown & Co., Little Rock, Ark.; Richard E. Kohn, Richard E. Kohn & Co., Newark, N. J.

* * * *

Link-Belt Co., Chicago, in the process of expanding its facilities, announces moving offices to larger quarters in Cleveland, Baltimore, Huntington, W. Va., and Newark, N. J.

* * * *

Corn-Soybean Day at Wooster, Ohio, has been scheduled for September 15, announces the Ohio Agricultural Experiment Station which sponsors several such visitors' days during the summer.

* * * *

A new 12-page catalog describing the complete line of Eriez permanent non-electric magnetic separators and electronic metal detectors, is now available. Copies may be obtained by writing for Catalog No. 14, Eriez Manufacturing Co., 937 East 12th St., Erie, Pa.

* * * *

Pictures and story about the new Central Soya Oil Mill, Gibson City, Ill., and Link-Belt equipment installed there are contained in the June-July issue of that company's house organ, Link-Belt News.

* * * *

Willard E. Hart Grain Co. announces the opening of an office of general brokerage of grain at 526 Board of Trade, Indianapolis, Ind.

* * * *

A new, high speed elevator bucket designed to combine large capacity, durability and low operating cost is announced by the Link-Belt Co. Book No. 2299 may be obtained by writing Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill.

* * * *

Plans to erect a $220,000 mill at Citronelle, Ala., for processing soybeans and other edible oil products were announced recently. Construction is expected to begin about August 1. Project is being sponsored by residents of Citronelle and the L. G. Ross Engineering Co., Miami, Fla.

* * * *

"The Inside Story of Allis-Chalmers 'Safety-Circle' Motor Protection," is an 8-page bulletin just released by the company. Copies of the bulletin, No. 51B6210B, may be obtained from Allis-Chalmers Manufacturing Co., 1159 S. 70th St., Milwaukee, Wis.

* * * *

Swift and Co., Chicago, has announced that a soybean experimental plot at Frankfort, Ind., will be planted and maintained by Purdue University.

* * * *

Durkee Famous Foods recently held open house in their margarine plant at Macon, Ga. This is the first of three manufacturing units to be erected in Macon by the Glidden Co., Cleveland, Ohio.

TO OPEN NEW PLANT

NAT B. MOREY

Construction on the new Ralston Purina plant at Bloomington, Ill., has progressed to such an extent that the company will begin processing soybeans and grains there on August 15, according to Donald Danforth, president.

On July 1 Nat B. Morey, present assistant manager of Purina's Buffalo, N. Y. mill, will take over the management of the new Bloomington plant. Jay Clark will be the superintendent, and John O'Connor will be manager of the grain department.

Formal opening at Bloomington is tentatively scheduled for early fall. When the plant is in full operation, total personnel will be about 150 people. The new soybean solvent processing plant at Iowa Falls, Iowa, is scheduled to begin its operations about July 15.

—sbd—

HEADS BROKERS

Howard A. Hoaglund, Zimmerman Alderson Carr Co., Chicago, Ill., was elected president of the National Fats and Oils Brokers' Association at the Association's annual meeting in French Lick, Ind., May 23.

Other officers were Paul Lacy, Lacy-Logan Co., Dallas, Texas, vice president; and George K. Dahlin, Roesling, Monroe & Co., Chicago, secretary-treasurer.

Elected directors for 1949-50: R. W. Powell, Goldsboro, N. C.; Wal-

ter Brooks, Atlanta, Ga.; J. Jervys Lusk, Greenville, Miss.; J. D. Guillory, Memphis, Tenn.; Carr Robinson, Dallas, Texas; Marvin Wood, San Francisco, Calif.; W. L. Dickinson, Chicago, Ill.; and Joseph Hart, New York, N. Y.

—sbd—

CONTRACT TO BLAW-KNOX

As a part of A. E. Staley Manufacturing Co. modernization program, chemical plants division of Blaw-Knox Co. Pittsburgh, Pa., has been awarded a contract to supply processing equipment and engineering for an 800-tons per day soybean extraction plant. Two parallel lines of equipment are to be used, each designed for a capacity of 400 tons per 24-hour day.

The equipment to be supplied by Blaw-Knox includes flaking mills, extractors, desolventizers, toasters, coolers and distillation equipment. The engineering covers the design of the preparation building, extraction building, grinding, bagging, warehousing facilities, water pumping and cooling facilities, and other yard accessories.

A. E. Staley Manufacturing Co., who are both corn and soybean processors, will construct this plant in Decatur, Ill., adjacent to the company's present extraction plant which was completed in 1945. The contract for plant construction and equipment installation will probably be let early in July.

—sbd—

NEW BURROWS CATALOG

This is the new 1949 catalog just issued by the Burrows Equipment Co. It provides a complete and dependable source for practically everything in equipment and supplies for the grain, seed and feed industries, and is of great value to operators of grain elevators, feed mills and seed houses. A free copy may be obtained from the Burrow Equipment Co., 1316-D Sherman Ave., Evanston, Ill.

George Schmidt, Archer-Daniels-Midland Co., Decatur, Ill., has announced the invention of a new car unloader. His working table model is distinctive for its moveable telescoping boom, by means of which one operator can place the shovel into any corner of the car. Two hydraulic cylinders on the side break down the doors, saving time.

* * * *

Delta Seed Co. of West Memphis, Ark., has purchased the main hangar of the army airport at Halls, Tenn., to be used as a processing plant for seed of all kinds. Pat Parker, formerly with the Buchanan Seed Co., Memphis, Tenn., will manage the new plant.

* * * *

The Fisher Plantation, Essex, Mo., is putting up a 10,000-bushel soybean storage tank made by Butler Mfg. Co.

* * * *

John A. Kennedy has been appointed sales manager of the metropolitan division of American Mineral Spirits Co., according to a recent announcement by E. M. Toby, president. The new plant at Carteret, N. J., to be under Kennedy's supervision will distribute a complete line of chlorinated solvents, alcohols, esters, ketones and plasticizers.

* * * *

R. S. Aries & Associates, consulting engineers and economists, 26 Court St., Brooklyn 2, N. Y., has published a new leaflet, "Chemical Process Engineering," explaining the firm's services in this field.

* * * *

J. I. Case Co., Racine, Wis., has issued two new publications on conservation: "Industry's Stake in Conservation," by Fred A. Wirt, and "Healthy, Productive Soil Is Just as Important to Industry as to Agriculture," by H. A. Lyon.

* * * *

Doyle Henderson, Blytheville, Ark., is improving his handling facilities by adding another leg and a 3,600 bushel Butler tank to his elevator to speed up unloading.

* * * *

The Deeks & Sprinkel Co., Cincinnati, and Louisville, has been appointed sales representative for the chemical division of General Mills, Inc., for Cincinnati, Louisville, Indianapolis, Columbus and Dayton. The firm will handle the company's complete line of vegetable, animal and marine fats and oils as well as all organic chemical derivatives for the technical trade.

* * * *

The office of the Kansas Soya Products Co., Emporia, Kans., was damaged by fire recently. A faulty transformer in a concealed lighting system caused the fire which resulted in an estimated $1,000 damage.

* * * *

Edgar County Grain Co., Harris Spur (Horace p. o.), Ill., purchased the local elevator at an auction sale of the property of Edgar W. Van Zant. The Edgar County Grain Co., now owns five elevators in the northern part of Edgar County.

* * * *

Assumption Co-Op Grain Co., Assumption, Ill., will build a 100,000 bushel addition to its elevator.

SCENE AT IOWA PLANT

—Photo by Cooperative Consumer

How soybean oil is squeezed out of the beans by Expellers is explained to a group on tour of Boone Valley Cooperative Processing Association at Eagle Grove, Iowa, by Ed Olson (right), the manager. About 1,000 Iowa farmers, farm boys, vocational agriculture students and GI on-farm trainees in more than 30 groups visited the Eagle Grove plant during late winter and early spring.

— s b d —

PRODUCE HORMONES

Large-scale production of steroid hormones has begun in the new plant of Sterol Derivatives, Inc., in Los Angeles. Production of progesterone and ethinylestradiol is already under way.

In the near future it is anticipated that the following hormones will be produced: testosterone, methyltestosterone, testosterone propionate, estradiol benzoate, estradiol, estrone, and other estrogenic substances.

The hormones currently in production are derivatives of stigmasterol and sitosterol, obtained from soybean oil foots.

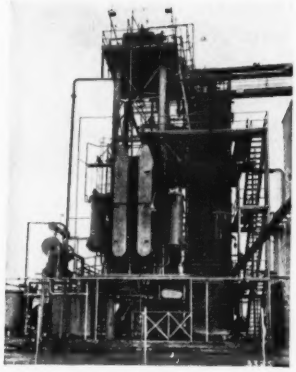
Mechanical Screw-Press

and

Solvent Extraction Equipment

PATENTED

For Soybeans and Flaxseed



Outdoor type Solvent Extraction Outfit.

- **NEWEST IN DESIGN**
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Capacity standard plants
50 to 600 tons per
24 hour day.

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Oldest in experience . . .
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VEGETABLE OIL PROCESSING MACHINERY

We build

Hydraulic Presses
Screw Presses and
Solvent Extraction Equipment

More than sixty percent of all tonnage of oil bearing seed and nuts is processed on

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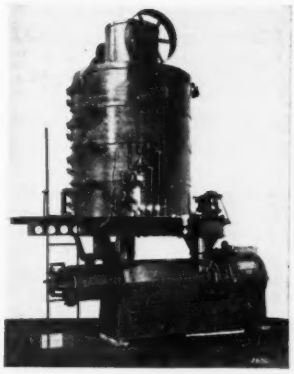
As builders of all types of equipment, we can recommend without prejudice the most economical and satisfactory machinery for your exact needs.



Mechanical Screw Press with Four-High Cooker Dryer.

THE FRENCH OIL MILL MACHINERY CO.

PIQUA, OHIO

Burglars entered the plant of the Edgar County Grain Co., Paris, Ill., recently, stealing 27 bags of growing mash valued at $121.50.

* * * *

Cec. W. Carroll, formerly of Central Soya Co., Inc., Fort Wayne, Ind., has accepted a position in the grain buying and merchandising division of the Lawrenceburg Terminal Elevator Corp., Lawrenceburg.

* * * *

Norvell-Williams, Inc., Fort Scott, Kans., announces the manufacture of the Nor-Vell "Hustler," a new single-section sifter which will be adaptable to soybean oil meal.

* * * *

Simon Levi Company, Ltd., of Los Angeles, has been named exclusive distributor in southern California for the "Good Luck" line of margarine and other food products manufactured by the John F. Jelke Co. of Chicago.

* * * *

Appointment of Harry W. Bennett, Jr., of Bronxville, N. Y., as advertising manager of the John F. Jelke Co., Chicago, was announced recently by James M. Elliott, president.

* * * *

Wendall Wheeler has been named manager of Cargill, Inc., Spencer, Iowa, to succeed Bob Hubbard who has been promoted to the position of superintendent of the Cargill plant at Fort Dodge, Iowa. Hubbard was formerly manager of the Spencer division and Wheeler worked in the Minneapolis Cargill plant.

* * * *

M. G. Moore & Sons, Cardwell, Mo., have purchased the Hall Grain Co. near Cardwell and the Flannigan Elevator, Leachville, Ark. They plan to handle soybeans at both elevators this fall.

* * * *

Earl F. Crouse, Dorsey Glenn, and James N. Moffett were honored recently for 10 years of service to the Doane Agricultural Service Inc., St. Louis, Mo., it was announced by the house organ, Little Journeys to Farmland.

* * * *

Canalou Cotton & Grain Co., Canalou, Mo., is improving its soybean handling facilities by adding a 6,000-bushel storage tank. This tank is being constructed by the Memphis Concrete Silo Co.

* * * *

"The V. D. Anderson Co., Its Organization and Its Products" is a bulletin put out by the V. D. Anderson Co. of Cleveland, Ohio, showing pictures of the plant, its products and organization and telling of the improvements made by the firm.

* * * *

John Flora, formerly associated with Spencer Kellogg & Sons, Buffalo, N. Y., has joined the firm of H. L. Raclin & Sons, Chicago commodity brokers. He will trade in fats and oils and other commodities.

* * * *

Claude S. Halderman, 51, agricultural division, Cargill, Inc., Minneapolis, died of a heart attack recently.

* * * *

Dow Chemical Co., Midland, Mich., has announced the following promotions: Leland I. Doan, president; Donald Williams, director of sales; D. K. Ballman, sales manager; Dr. L. S. Roehm, assistant sales manager.

* * * *

Spontaneous combustion was blamed for a fire in an air duct of the soybean crushing plant at the State Mill and Elevator, Grank Forks, N. D., recently. Little damage was reported.

* * * *

Central Soya Co., Inc., and their affiliate, McMillan Feed Co., Fort Wayne, Ind., has purchased the Barrett Grain elevator at Wilmington, Ohio.

* * * *

The $100,000 fire which destroyed the feed mill and office building of the Montgomery Service Company at Butler, Ill., was caused by spontaneous heating of a quantity of soybean meal.

* * * *

Harold J. Coghlan has been named manager of tank car sales in New York and New Jersey for American Mineral Spirits Co. He has been with Amsco since February 1946 in the sales department.

GLIDDEN PROMOTION

JAMES C. RANKIN

James C. Rankin, recently named executive assistant to the president of the Glidden Co., has been promoted to the position of general manager of the company's large feed mill division in Indianapolis.

Rankin, who joined the Glidden Co. in 1942, is widely recognized as one of the city's outstanding young executives.

In his new position Rankin will have full responsibility for all operations of the feed mill division and will work under the supervision of Paul E. Sprague, vice president and director of the Glidden Co. and chairman of the research and development committee.

—s b d—

STORAGE ADDED HERE

Additional elevator storage capacity of almost 100,000 bushels to be completed before soybean harvest is being built in Matthews, Mo., population 500, it is reported.

W. A. Gemeinhardt Seed Co. is erecting two 14,500-bushel tanks in addition to a new office building and a 45-foot Howe scale. The firm already has a storage capacity of 50,000 bushels. Gemeinhardt is also building a new dump so that corn and soybeans can be handled at the same time.

Allen & Davis Cotton & Gin Co. is erecting five 14,200-bushel tanks.

Butler Manufacturing Co., Kansas City, Mo., furnished the tanks for both jobs.

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Stands Out on FULTON TEXTILE BAGS

Printing on bag fabrics is an art developed by many years of experience. To get best results, brands should be technically designed for bag printing. On either cotton or burlap bags, Fulton artcraft printing will give you a job that will make your brand stand out.

WE CAN SUPPLY YOU WITH ALL TYPES OF TEXTILE OR MULTIWALL PAPER BAGS

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- Dallas
- Kansas City, Kans.
- Los Angeles

WASHINGTON Digest

By PORTER M. HEDGE

Washington Correspondent for The Soybean Digest

FATS, OILS OUTLOOK. Soybeans are the brightest spot in a rather discouraging outlook for fats and oils. That's the official consensus here. It goes for both the short pull, and the long.

The acreage will be down this year. If it drops to 9 million acres, as expected, there's likely to be 50 million bushels less beans, and 500 million pounds less oil. That should help the price.

Competition from cottonseed oil may be less than anticipated. Cotton acreage is likely to run below earlier expectations. Growing conditions are not as good as it seemed they'd be a short time ago.

Soybeans are in a favored spot in exports. Even though ECA and Army procurement appropriations are cut—as seem certain—soybeans will be less affected than other fats and oils.

From the grower standpoint, there's 90 percent of parity price support as rock bottom. Some here think the price will average out a little above this. It's believed that processors will reach for beans to keep their facilities in full use.

The farmer also has an attractive government storage program. He can borrow 85 percent of the cost of building soybean storage, with 5 years to pay it off at 4 percent interest. He can also get a 7-cent-a-bushel storage allowance for 1949 beans. He can't get this, or any, storage allowance for corn and feed grains. Officials expect a big increase in soybean farm storage this year.

On the other hand, the lard surplus hangs over the whole fats a oils market. It promises to grow larger.

And the price ground lost late last year due to official bungling of fats and oils exports can't be regained soon. The inevitable price decline was turned into a rout by stupid damming back of exportable surpluses. What wasn't moved and consumed then when it could have been, can't be made up now.

D. A. FitzGerald, deputy Administrator of ECA, said in recent Senate hearings that ECA asked for more fats and oils from late last September to last February than the Commerce Department would grant. He said that one of the most frequent refusals, or reduction of requests, was for soybeans, soybean oil, and lard. He added that more than half of all the fats and oils exports of the first 14 months of ECA came in the last 4 months of that period. That was when Congress forced the President to take the export decisions out of the hands of Secretary of Commerce Sawyer.

ECA SLASH. The slash in ECA appropriations for the current year will affect soybean and oil exports a little. But not as much as other fats and oils, for European and Far Eastern preference for soybeans is high.

A cut of 300 to 400 million dollars in ECA appropriations seems probable. On the basis of a 500-million dollar cut, ECA thinks fats and oils exports would be reduced 15 percent below its budget estimates. This takes into account the savings in export buying due to falling prices.

ECA officials have emphasized that this initial cut in exports is only part of it. They claim there's a spiral effect. Reduction in ECA exports to Europe would result in Europe exporting less of its own goods. This, they say, would reduce their imports, and would cut still more deeply into U.S. exports.

How much of this is scare talk to get full appropriations is hard to tell. But on the basis of a 300-million-dollar cut, it seems certain that more than 80 percent of it would come out of farm exports. Soybeans and wheat would be effected less than most others. However, officials are inclined to think that soybean and oil exports might be nicked 10 percent below the earlier estimates.

It's impossible to tell in advance. For after all, what Europe buys on the ECA program depends not on! on how much money is available, but on what European countries choose to buy. And they definitely want soybeans.

RELIEF MEASURES. Relief measures for the gloomy fats and oils situation are in the future. The two chief ones discussed here are the import equallization fee plan, and more money for fats and oils research.

Senator Gillette (D., Iowa) is pounding away with his hearings on

fats and oils. But he admits that all he's doing now is spade work for getting the equallization fee on imports next year—maybe.

In effect, this plan would let us import all the copra or other foreign oils our economy needs, or wants, but at the same time would result in our export of the same amount of domestically produced fats and oils. The plan will bring much State Department opposition.

The enlarged fats and oils research program under the market-research act has been made possible by a $225,000 appropriation for t' Department of Agriculture. It's earmarked to step up the search for new markets and new uses. There's no date tag on it, though, and research is slow. The program offers no early relief.

Part of the money will go to PMA's fats and oils branch to hunt new markets. The major part is for USDA's regional laboratories, to intensify the search for new uses. Of the $130,000 allotted for new uses, up to 45,000 may be spent on contract for work done by universities, experiment stations, and private firms.

The regional laboratory at Peoria, Ill., will handle the enlarged program for soybean oil, corn oil, linseed oil and safflower seed.

PRICE SUPPORTS. Concern about the future of fats and oils is tied up with the market fight between synthetic chemical products, and animal and vegetable oils. In Senate testimony, Frank B. Wise of the National Renderers Association, said that the domestic inedible animal fat industry has already lost 25 percent of its markets to synthetic soap detergents.

Then there's lard versus chemical emulsifiers, and leather versus synthetic rubber compositions. The leather industry is said to have lost 35 percent of its market already.

The battle may become more acute if Secretary Brannan's price support plan goes into effect—as it probably will in 1951, if not next year. For it promises to usher in a livestock economy. That means more meat, lard, tallow and leather.

In hot discussions here about various farm price support plans, there's much speculation about what prices would be without any supports or controls. It's iffy estimating, for price supports are here to stay. But it has a bearing on how many controls farmers will be willing to accept in exchange for assured prices.

A recent compilation has been made of off-the-record estimates of market economists as to probable prices the next 5 years, assuming there's no depression, and no price supports. The range for soybeans is put at $1.25 to $2 a bushel; corn at 65c to $1 a bushel.

The price support bill by Rep. Pace (D., Ga.) will pass the House. It embodies most of the Brannan plan. Its chances in the Senate are slim, but may improve.

The chances are even now that any one of three support programs will be okayed by Congress this session for 1950: Brannan plan, one-year extension of present supports, or the Aiken Act.

—s b d—

● **ON COTTONSEED.** There is no assurance that price supports for cottonseed will be established for 1949, in spite of the political pressure for them. Secretary Brannan has the matter under consideration, but there's no indication yet that Department policy will be reversed.

Senator Stennis (D., Miss.) predicted cottonseed price supports following a conference with the Secretary, but this cannot be confirmed. On the contrary, the Secretary's office intimates that there will be no change of policy.

Farm bureau and congressional leaders are hammering hard for action. They point out that cottonseed has dropped to $35 a ton, and may go lower. They say that $50 a ton would represent 90 percent of parity, such as competing soybeans and flax seed get.

Market Street

We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate: 5c per word per issue.
Minimum insertion $1.00.

FOR SALE—**Anderson** Expellers, **French** Screw Presses all models, as is or rebuilt for specific materials. Pittock & Associates, Moylan, Penna.

AVAILABLE—Chemical Engineer with experience in design and operation of complete solvent extraction mills. Capable of rendering valuable service to company planning conversion of existing mill or group interested in building or promoting a new soybean plant. Write Box 319 J, Soybean Digest, Hudson, Iowa.

In The MARKETS

SOYBEANS, MEAL STRONG

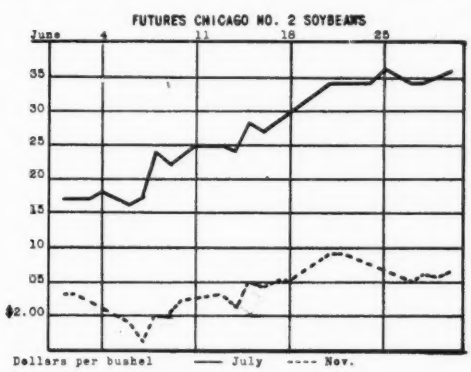
Soybeans and soybean oil meal gained considerable ground in June, reversing a downward trend of some weeks duration. The spread in July futures for No. 2 soybeans was 20c for the month—from $2.16 June 6 to $2.36 June 25.

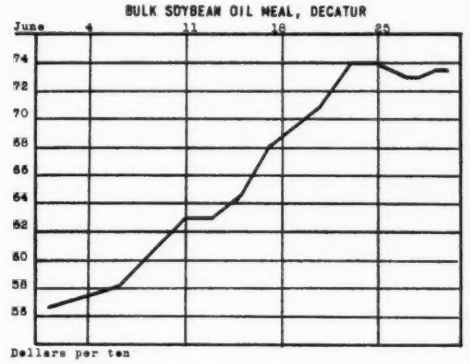
Meal also showed a wide spread. After hitting the lowest point since February, June 1, meal then gained $18 to reach the highest point in 1949, $74 for bulk soybean oil meal, Decatur basis, June 23-25. Meal closed at $73.50 for the month.

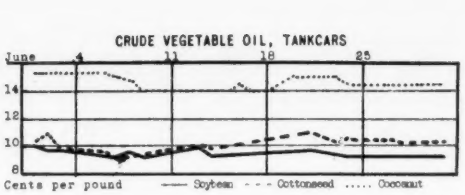
Strength in beans and oil meal failed to be reflected to any extent in the oil, which lost some ground. The month's close was about 1c under the opening. A low for the year of 9c for crude soybean oil in tankcars was reached June 7 and again June 29-30. Buyers were a little reluctant due to the belief that supplies of fats and oils will be plentiful for the next 12 months.

The cash soybean market was dull the fore part of June as crushers were not active buyers due to unsatisfactory prices for meal and oil. But trade livened as the market worked higher. Some said it was reflecting a strong wheat market.

Soybean oil meal led the recovery in feedstuffs markets. As supplies for nearby shipments tightened up buying interest increased. A strengthening influence was the Army's purchase of 12.3 million pounds of soy







flour and 2 million pounds of soy grits for export, shipment to be made July 15.

Production was said to be heavy but was mostly being applied on previously contracted orders.

The usual premium of cottonseed oil over soybean oil was wiped out the early part of June. Coconut oil continued to command a premium over these two domestic oils.

The vegetable oils markets showed a little strength during mid-month.

MEMPHIS SOYBEAN OIL MEAL FUTURES CLOSINGS JUNE 30*

Jly., 70.75-71.25; Oct., flat 61.25; Dec., 55.50-57.00; Jan., 54.25-56.00; Mar., 52.70-54.25; May, 51.80-53.75; Sales: 1,100 tons.

*Reported by the Chicago Journal of Commerce.

● **FACTORY USE SOYBEAN OIL.** Factory consumption of crude soybean oil during the first quarter of 1949 totaled 423,692,000 lbs., according to the Bureau of Census. Of this amount 406,974,000 lbs. were used in refining.

Factory consumption of refined soybean oil amounted to 333,797,000 lbs.

Consumption of crude soybean oil during the first quarter by edible uses: fat splitting 736,000 lbs.; hydrogenation 45,000 lbs.; sulphonation 150,000 lbs.; other processing 3,351,000 lbs.

Consumption of refined soybean oil during the first quarter totaled 297,367,000 lbs., in the following edible fields; hydrogenation 105,354,000 lbs.; sulphonation, 177,000 lbs.; winterizing 20,738,000 lbs., deodorizing (whole oil) 12,527,000 lbs.; other 2,209,000 lbs.; shortening 130,646,000 lbs.; margarine 5,372,000 lbs.; other edible 20,344,000 lbs.

Factory consumption of crude soybean oil during the first quarter of 1949 in inedible products by uses: soap 280,000 lbs.; paint and varnish 835,000 lbs.; lubricants and greases 90,000 lbs.; linoleum and oilcloth 5,830,000 lbs.; rubber 891,000 lbs.; core oil 2,195,000 lbs.; metal working 27,000 lbs.; paint and ink vehicles 1,587,000 lbs.; other inedible products 590,000 lbs.

Quantities of refined soybean oil used in inedible products during the first quarter of 1949; soap 414,000 lbs; chemicals 1,014,000 lbs.; paint and varnish 20,528,000 lbs.; lubricants and greases 99,000 lbs.; linoleum and oil cloth 3,037,000 lbs.; rubber 68,000 lbs.; ink 135,000 lbs.; core oil 1,372,000 lbs.; paint and ink vehicles 2,225,000 lbs.; other inedible products 7,527,000 lbs.

Factory production of crude soybean oil in April totaled 156,088,000 lbs., compared with 167,689,000 lbs. in March. Factory production of refined soybean oil for April totaled 127,425,000 lbs. compared with 137,031,000 lbs. in March.

Factory consumption of crude soybean oil in April totaled 140,404,000 lbs. compared with 151,644,000 lbs. in March. Consumption of the refined oil totaled 130,934,000 lbs. in April compared with 130,314,000 lbs. in March.

Factory and warehouse stocks of crude soybean oil totaled 105,365,000 lbs. Apr. 30 compared with 132,959,000 lbs. Mar. 31. Stocks of the refined soybean oil totaled 112,523,000 lbs. Apr. 30 compared with 123,562,000 lbs. Mar. 31.

● OIL MILL PRODUCTS. Reported by Bureau of Census, U. S. Department of Agriculture.

SOYBEANS: RECEIPTS, CRUSHINGS AND STOCKS AT OIL MILLS, BY STATES, APRIL 1949—MARCH 1949
(Tons of 2,000 pounds)

State	Receipts at mills		Crushed or used		Stocks at mills	
	April 1949	March 1949	April 1949	March 1949	Apr. 30, 1949	Mar. 31, 1949
U. S.	259,844	267,659	478,118	510,956	870,870	1,089,144
Arkansas	262	(3)	8,394	9,535	27,332	35,464
Illinois	110,241	129,268	180,656	193,870	357,553	427,968
Indiana	9,089	15,749	38,942	40,444	68,745	98,598
Iowa	71,105	*55,790	83,277	*86,600	103,393	*115,565
Kansas	7,642	12,070	9,456	13,294	12,292	14,106
Kentucky	4,975	1,586	13,236	14,347	40,856	49,117
Minnesota	9,270	*7,859	24,895	*22,641	24,840	*40,465
Missouri	9,613	11,057	15,413	16,402	49,158	54,958
Nebraska	2,707	1,153	4,113	4,975	8,172	9,578
North Carolina	451	563	5,575	7,342	7,636	12,760
Ohio	20,162	27,366	53,861	55,361	128,039	161,738
Oklahoma						
Texas	(3)	3,601	(3)	5,862	(3)	2,378
All Other	14,327	*13,078	40,300	*40,283	42,854	*66,454

* Revised
[1] Receipts exceeded by reshipments of beans previously received and held in the State. U. S. receipts are on a net basis, excluding transfers between mills.
[3] Included in "All other" to avoid disclosure of individual operations.

SOYBEAN PRODUCTS: PRODUCTION AND STOCKS AT OIL MILL LOCATIONS, BY STATES, APRIL 1949—MARCH 1949

State	Crude oil (thousand pounds)				Cake and meal (tons)			
	Production		Stocks		Production		Stocks	
	April 1949	March 1949	Apr. 30, 1949	Mar. 31, 1949	April 1949	March 1949	Apr. 30, 1949	Mar. 31, 1949
U. S.	156,088	*167,689	43,801	*45,181	376,746	403,904	23,427	24,021
Arkansas	2,463	2,726	1,794	1,631	6,228	7,142	879	1,016
Illinois	60,317	65,291	14,813	15,846	139,967	148,397	5,590	5,800
Indiana	12,707	13,174	2,811	2,387	30,477	32,128	1,618	1,496
Iowa	27,709	*29,067	7,557	*7,562	67,335	*70,596	3,119	*3,433
Kansas	2,892	4,477	1,414	1,312	7,500	11,287	124	245
Kentucky	4,591	4,793	551	612	10,263	11,191	456	558
Minnesota	8,485	*7,980	2,512	*1,788	20,214	*18,495	(1)	*1,476
Missouri	5,009	5,064	982	866	12,375	13,367	1,268	1,397
Nebraska	1,291	1,587	593	1,142	3,446	4,181	(1)	(1)
N. Carolina	1,432	1,996	1,220	1,524	4,320	5,740	1,284	911
Ohio	17,330	17,777	4,629	4,409	42,968	44,189	2,654	2,324
Oklahoma							53	143
Texas	(1)	1,671	(1)	766	(1)	4,737	(1)	476
All other	11,862	*12,086	5,125	*5,336	31,653	*32,454	6,382	*4,746

* Revised.
[1] Included in "All other" to avoid disclosure of individual operations.

PRIMARY PRODUCTS EXCEPT CRUDE OIL, AT CRUDE OIL MILL LOCATIONS: PRODUCTION, SHIPMENTS AND TRANSFERS AND STOCKS, APRIL 1949—MARCH 1949

Products	Production		Shipments and transfers		End of month stocks	
	April 1949	March 1949	April 1949	March 1949	Apr. 30, 1949	Mar. 31 1949
SOYBEAN:						
Cake and meal*	376,746	403,904	377,340	410,952	23,427	24,021
Lecithin**	1,057,299	1,085,017	1,231,405	1,054,253	863,399	1,037,505
Edible soy flour, full fat*	459	362	387	411	214	142
Edible soy flour, other*	2,799	3,306	3,061	3,209	1,737	1,999
Industrial soy flour*	(1)	(1)	(1)	(1)	(1)	(1)

* Unit of measure in tons.
** Unit of measure in pounds.
[1] Not shown to avoid disclosure of individual operations.

● SOYBEAN INSPECTIONS.

Inspected receipts of soybeans in May were the largest of record for that month, according to reports to the Department of Agriculture. May inspections totaled 6,519 cars compared with 5,332 cars in April and 3,957 cars the May average for the crop years 1942-46. Inspected receipts for October through May were 87,386 cars compared with 73,007 cars for the same months last season.

The quality of the soybeans marketed in May remained about the same. 76 percent grading No. 2 or better compared with 74 percent in April and 73 percent for October through May. Eighty-seven percent graded No. 2 or better in May, and for October through May, last season.

Inspected receipts of soybeans in April were somewhat smaller than for the preceding month but about average, according to reports to the Department of

Agriculture. Inspections totaled 5,332 cars compared with 6,645 cars in March and 5,359 cars the April average for the crop years 1942-46. Inspected receipts for October through April were 80,867 cars compared with 70,088 cars for the same months last season.

● **SOYBEAN GLUE.** Consumption of soybean glue by the softwood plywood industry in April was 2,525,000 lbs. compared with 2,646,000 lbs. in March and 2,375,000 lbs. in April 1943, reports Bureau of the Census.

Consumption of phenolic resin glue was 2,363,000 lbs. in April compared with 2,917,000 lbs. in March and 3,781,000 lbs. in April 1943. Total consumption of all glues by the plywood industry in April was 5,648,000 lbs. compared with 6,407,000 lbs. in March and 7,068,000 lbs. in April 1943.

● **SOYBEAN STOCKS.** Production and Marketing Administration's commercial grain stock reports for June.

	June 1	June 7	June 14	June 21	June 28
Atlantic Coast	285	217	315	344	500
Gulf Coast	105	120	151	156	195
Northwestern and Upper Lake	132	154	284	361	418
Lower Lake	1,025	1,151	1,271	1,140	1,128
East Central	1,050	1,086	982	813	923
West Central Southwestern & Western	554	469	494	447	114
Total current week	3,151	3,197	3,477	3,291	3,278
Total year ago	2,415	2,300	1,919	1,685	1,581

● **STORAGE RATES BY CCC.** Storage rates paid by the Commodity Credit Corporation for holding loan wheat, soybeans and flaxseed will be continued during the year ahead, for 1949 crops, on the same basis as during the past year, the Production and Marketing Administration announced.

If wheat, soybeans or flaxseed is under the price-support loan program, and is stored on the farm, a storage allowance based on 7 cents a bushel for each of these crops will be made to the farmer if and when the commodity is turned over to the Corporation in satisfaction of the loan. If these three crops are in warehouse storage under the loan program, CCC will assume warehouse charges in line with the Uniform Grain Storage Agreement.

● **SHORTENING SHIPMENTS.** Reported by Institute of Shortening and Edible Oils, Inc., in pounds.

Week ending May 28	5,272,630
Week ending June 4	4,995,231
Week ending June 11	5,599,057
Week ending June 18	6,434,407
Week ending June 25	5,707,397

Grand total of shortening and edible oil shipments for May was 246,072,000 lbs., the Institute reports.

FORM NEW GERMAN SOYA ASSOCIATION

TO THE EDITOR:

The German Soya Association was founded in Hamburg, May 23, 1949. This association is formed by three groups of firms.

One group is the Protein Soya Importers' Union which handles all types of flour and soybeans imported except those which go for fat extraction to the oil mills; soybeans for full fat products; flours and grits for bread mixture and sausage program. As there is no free import, the firms take the material over from the ship as delivered under the U. S. Army purchase program. As soon as individual imports are admitted again, most of the firms will appear on the U. S. market as buyers of beans.

The second group is the full fat manufacturers of western Germany. These are the really progressive business men in the German soya trade and coincide with the importers' view that the soybean is primarily a protein seed with fat as a byproduct. These firms have invested many millions of marks in research and development work but have been for years almost entirely out of the market because they do not get raw beans for their production. This situation is regrettable also from the growers' point of view, because as long as the firms are entirely closed down, they cannot add to the international progress of soybean processing. It is one of the outstanding tasks of the German Soya Association to assure that these manufacturers are no longer excluded from supply of soybeans.

I know that Mr. Ersel Walley will confirm that the products of these firms are excellent with regard to taste, nutritive value, suitability for almost any purpose in human nutrition and are a splendid means to popularize utilization of the soybean for human food. It would be fine if the American Soybean Association could see its way clear to assist in making this important industry run again.

The third group of the German Soya Association is formed by individual firms which are not members of the other organizations mentioned—individual firms of pharmaceutical and food industry branches.

As the German Soya Association is interested in all kinds and types of first hand information on soya work here and abroad, it is in the same way always gladly prepared to give information on its own activity and on all which is done in this country in connection, direct and indirect, with soya. — *Dr. William Bening, Frankfurt/Main, Germany.*

The German Soya Association is distinct from the German Soybean Association mentioned by Dr. Wolfgang Von Schuh on page 50, the January issue of Soybean Digest. The latter is primarily an association of growers of soybeans, the former of consumers of soybeans and soy products.—Editor.

Soy Trade in China

TO THE EDITOR:

I am a Chinese student studying for my postgraduate degree in the Wharton School of Finance and Commerce, University of Pennsylvania. My major field of study is foreign commerce and business administration. As a partial requirement leading to the degree of Master of Business Administration, a thesis must be written and handed in before graduation.

My thesis is, "Soybean Trade of China." I write it on the basis of international trade in soybeans and at the end I do make an attempt to evaluate the development of soybean production in all countries in the world.

I have been interested in soybeans since my childhood. My father and my brothers have been in the soybean business for more than 30 years. We have a firm with branch offices in all big cities in China. At the same time we own quite a number of farms and we have some oil processing houses. Moreover, we have been carrying on soybean exports to European countries and this country before World War I. Since most of the soybean growing districts are now taken by the communists our business has been at a standstill. Of course, in the future, we expect to resume our business if possible.

It is my zealous wish to visit some soybean plants in this country after I complete my study at Wharton.—*James T. Ian, Philadelphia 4, Pa.*

LETTERS

THE PRESS

Road to Progress

This country could use a lot more genuine advocates of free enterprise like Merritt M. Nash, that dairy farmer who flew here from Washington State the other day to tell Congress why the Federal margarine taxes should be repealed.

"Those unwarranted taxes," he said, "are a detriment to the dairy industry. It's wrong to rely on restrictive legislation against a legitimate competitive product. The industry should promote butter instead of asking the government to demote something else."

Mr. Nash went on to argue that the energy wasted on fighting margarine should be devoted to improving and pushing the sale of "that product for which we have our most favorable market—good fluid milk."

Senator Butler of Nebraska, a member of the committee before which Mr. Nash was testifying, asked:

"If there were a synthetic substitute for milk, just as margarine is a substitute for butter, would you then say there should be no protection for the regular milk producer like yourself?"

"Senator," replied Mr. Nash, "I've thought about that question, and I'll say this: I'll never stand in the road of progress, not if it puts me out of business.

"My grandfather manufactured carriages and buggies. In 1909, when my father bought a Ford, my grandfather disowned him—cut him off with a dollar in his will. 'Because,' grandfather said, 'automobiles are going to be the ruination of the country. They're putting me out of business, and putting 25 people who work for me out of jobs.'

"But, Senator, do you think that over the long run it was a bad thing to have the automobile industry come in? Every new development in this country hurts some segment of our society while we're making the change.

"If someone produced a synthetic product with all the wonderful qualities of fluid milk, I'd be among the first to say: 'Mister, if you can produce it with less effort and cost than I can produce milk, I'll sell every cow I've got tomorrow and get into your business or some other."—*Washington (D. C.) Daily News.*

Introducing:

the new SOY-RICH PRODUCTS Extraction Plant

A complete package unit by BLAW-KNOX

Mr. Ralph S. Moore

This plant, purchased and erected in 1948, is currently being operated well above the guaranteed capacity of 75 tons per day. In a recent letter, Mr. Ralph S. Moore, Executive Vice-President, Soy-Rich Products, Inc., states:

"For your information, we processed about 96 tons of soybeans yesterday, during the 24 hour period, with an average residual oil of 0.28 and a pH factor of 7.2, which is very good as far as urease activity is concerned."

Because of this installation, Soy-Rich is recovering 6,201 pounds ***more*** oil each day than they would by the use of screw presses, or 653 pounds ***more*** than by use of the ordinary solvent extraction system.

Blaw-Knox will supply a similar installation for your plant. Your single purchase order will cover everything — equipment, erection, construction, and start-up operation.

CHEMICAL PLANTS
Division of **BLAW-KNOX**
CONSTRUCTION CO.
321 PENN AVE.
PITTSBURGH 22, PA.

All's Well That BEGINS Well!

"DOC" MacGEE SAYS: "Well begun is half done," which certainly applies in an industrial plant using solvents in its operations. Start out with good ingredients, good solvents, and you're just that much closer to producing a top quality product . . . and saving money in the process!

Time and experience have shown that SKELLYSOLVE consistently meets these requirements, has met them for nearly 20 years. That is because Skelly pioneered the large scale production of hexane, heptane, and octane type naphthas from natural gas . . . and Skelly has employed diligent research and expanded its facilities to meet changing conditions and the growing specialized needs of industry.

Every SKELLYSOLVE fraction has exceptional purity, unvarying uniformity, unusually close boiling ranges, and remarkable freedom from foreign tastes and odors. These in themselves make SKELLYSOLVE a leader. But there is also SKELLYSOLVE'S famed dependability of supply—vital to the user who must have his solvents on time and in the des red quantities.

And, backing up SKELLYSOLVE'S unparalleled program of quality and service to industry is a fully-trained staff of Technical Field Men whose unique skills and competent counsel are available to every SKELLYSOLVE user.

Sound, sensible reasons why good products and successful manufacturing processes start with SKELLYSOLVE—why you profit *most* when SKELLYSOLVE works for you. You owe it to yourself to discover the benefits of SKELLYSOLVE. Get the facts now—write, wire, or phone us today for particulars.

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